



July 28, 2021

**Via Sharefile**

Mr. Sameh Abdellatif  
Hazardous Waste Programs Branch  
US Environmental Protection Agency Region 2  
290 Broadway, 22<sup>nd</sup> Floor  
New York, New York 10007-1866

**Re: Second Quarter 2021 Progress Report**  
**Hess Corporation – Former Port Reading Complex (HC-PR)**  
**750 Cliff Road**  
**Port Reading, Middlesex County, New Jersey**  
**EPA ID No. NJD045445483**  
**NJPDES Permit NJ0028878 & NJ0102709**

Dear Mr. Abdellatif:

Enclosed please find the Second Quarter 2021 Progress Report for the above referenced site. This report was prepared by Earth Systems, Inc. on behalf of Hess Corporation. As required by Module II (D) of the Hazardous and Solid Waste Amendments (HSWA) Permit number NJD045445483, the enclosed report presents activities associated with the Solid Waste Management Units (SWMUs), including the North Landfarm, South Landfarm, and No. 1 Landfarm, all of the Areas of Concern (AOCs), Historic Spills (HSs), and Remediation Management Units (RMUs) identified at the Former Port Reading Complex.

Should you have any questions or comments relating to this report, please call me at 732-739-6444, extension 2305. I can also be reached via e-mail at [ablake@earthsys.net](mailto:ablake@earthsys.net). If you have any questions relating to the project and schedule moving forward, you can also contact Mr. John Schenkewitz of Hess Corporation at 609-406-3969.

Sincerely,  
Earth Systems, Inc.

A handwritten signature in blue ink that reads "Amy Blake".

Amy Blake  
Senior Project Manager

cc: Ms. Julia Galayda – NJDEP (via sharefile)  
Mr. Andrew Park – EPA (electronic copy)  
Mr. John Schenkewitz – Hess Corporation (electronic copy)  
Mr. Rick Ofsanko – Earth Systems, Inc. (electronic copy)  
Mr. John Virgie – Earth Systems, Inc. (electronic copy)

**SECOND QUARTER 2021 PROGRESS REPORT**  
**HESS CORPORATION – FORMER PORT READING COMPLEX**  
**NORTH LANDFARM, NO.1 LANDFARM, and SOUTH LANDFARM**  
**SOLID WASTE MANAGEMENT UNITS (SWMUs), AREAS OF CONCERN (AOCs),**  
**HISTORIC SPILLS (HSs), AND COMBINED REMEDIATION MANAGEMENT UNITS**

Hess Corporation – Former Port Reading Complex  
750 Cliff Road  
Port Reading, Middlesex County, New Jersey  
EPA ID#: NJD045445483

JULY 2021

Prepared for:



**Hess Corporation**  
*Trenton-Mercer Airport  
601 Jack Stephan Way  
West Trenton, New Jersey 08628*

Prepared by:



*1625 Highway 71  
Belmar, New Jersey 07719*

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## 1.0 Introduction and Summary Table

Earth Systems, Inc. (Earth Systems) has been retained by Hess Corporation (Hess) to provide environmental consulting services for the Hess Corporation – Former Port Reading Complex (HC-PR) facility located at 750 Cliff Road in Port Reading (Woodbridge Township), Middlesex County, New Jersey. A United States Geological Survey (USGS) 7.5 minute series quadrangle map (Arthur Kill, New Jersey) depicting the site location, facility and associated land features is included as **Figure 1**. A Site Plan has been included as **Figure 2** and a tax map of the site is provided as **Figure 3**.

This report documents the investigative and groundwater sampling activities completed in the Second Quarter 2021 (Q2 2021) at the Solid Waste Management Units (SWMUs), Areas of Concern (AOCs), Historic Spills (HSs) and Remediation Management Units (RMUs). Investigative and remedial activities included groundwater gauging, groundwater monitoring, soil investigation, Light Non-Aqueous Phase Liquid (LNAPL) monitoring and product recovery.

### SUMMARY OF ACTIONS

Location	Case Number/ Description	Action
AOC 1	North Landfarm	Quarterly Groundwater Monitoring – April 2021
AOC 2	South Landfarm	Quarterly Groundwater Monitoring – April 2021
AOC 3	No. 1 Landfarm	Quarterly Groundwater Monitoring – April 2021 Tri-Annual Leachate Sample April 2021
AOC 10	Truck Loading Rack	LNAPL Recovery (Passive & Active) – Conducted as Needed
AOC 14a	TM Monitoring Wells	Bi-weekly Groundwater Gauging Events
AOC 103	Fire Pits / Fire Training Area	Bi-weekly Groundwater Gauging Events; LNAPL Recovery (Passive & Active) – Conducted as Needed
TFMU	Tankfield Remediation Management Unit	Bi-weekly Groundwater Gauging Events
SRMU	Southern Remediation Management Unit	Bi-weekly Groundwater Gauging Events

## 2.0 ISRA and Regulatory Requirements Update

A Preliminary Assessment Report (PAR) was submitted to the New Jersey Department of Environmental Protection (NJDEP) and the United States Environmental Protection Agency (USEPA) on October 9, 2015. A total of 117 AOCs were identified in the PAR (**Figure 4.1 through 4.5**). Earth Systems concluded that, of the total number of identified AOCs at the site, 62 AOCs required further investigation. The Site Investigation Report (SIR) was submitted to the NJDEP and the USEPA on November 7, 2015. The NJDEP provided several comment letters on the SIR. The following table lists the dates of the comment letters and responses:

NJDEP Comment Letter Date	Response to Comment (RTC) Date
August 10, 2017	December 20, 2017
June 9, 2020	July 31, 2020
December 6, 2018 (Ann Charles NJDEP)	October 19, 2020
December 6, 2018 (Jill Monroe NJDEP)	October 19, 2020
November 17, 2020	February 17, 2021

The SIR comments will be addressed in the Site or AOC specific Remedial Investigation Workplan / Remedial Investigation Report (RIW/RIR) report(s).

RIWs summarizing proposed remedial investigation activities for selected priority AOCs were submitted in 2016. The RIWs relate to the following priority AOCs and AOC groupings, which have been identified by the NJDEP and USEPA:

AOC ID	RIW/RAW Submitted	RIW/RAW Approved	Current Status
AOC 1 – North Landfarm	3 <sup>rd</sup> Quarter 2016		<ul style="list-style-type: none"><li>- Comments received from NJDEP/USEPA North Landfarm Remedial Action Workplan (RAW) 2018</li><li>- 90% Soil Remediation Action Design for the engineering controls submitted to NJDEP/USEPA April 2020</li><li>- Updated Groundwater Sampling Plan being prepared for submittal in 2021</li></ul>
AOC 2 – South Landfarm	3 <sup>rd</sup> Quarter 2016		<ul style="list-style-type: none"><li>- Comments received from NJDEP/USEPA South Landfarm RAW 2019</li><li>- Response is being completed and will be submitted (Q3 2021)</li></ul>

			<ul style="list-style-type: none"> <li>- Updated Groundwater Sampling Plan being prepared for submittal in 2021</li> </ul>
AOC 3 – No. 1 Landfarm	3 <sup>rd</sup> Quarter 2016		<ul style="list-style-type: none"> <li>- Comments received from NJDEP/USEPA No. 1 Landfarm RAW 2018</li> <li>- 100% Soil Remediation Action Design for the engineering controls was submitted to the NJDEP Q3 2019</li> <li>- NJDEP/USEPA approved the 100% design in April 2020</li> <li>- Permits were submitted for the final design in June 2020, September 2020, and October 2020 (see <b>Section 4.3</b> for permits status)</li> <li>- Updated Groundwater Sampling Plan being prepared for submittal in Q3 2021</li> </ul>
AOC 10 – Truck Loading Rack and AOC 57 –Day Tankfield (Area AOCs – AOC 29 – Mixing Basin, AOC 43 – Truck Unloading Area, AOC 110 – Oil/Water Separator, AOC 111 – Chemical Storage Area, AOC 82 – Former Incinerator Bldg, AOC 86 – Truck Rack VRU, AOC 109 – Truck Rack Sump	3 <sup>rd</sup> Quarter 2016/Supplementary RIW - 2 <sup>nd</sup> Quarter 2021	4 <sup>th</sup> Quarter 2017 & 3 <sup>rd</sup> Quarter 2018	<ul style="list-style-type: none"> <li>- Comments received from NJDEP/USEPA Q1 &amp; Q2 2017</li> <li>- Response to Comments (RTC) submitted in Q3 2017</li> <li>- On-site monitoring well installation conducted in Q4 2018</li> <li>- Soil investigation conducted in Q3 2019</li> <li>- Off-site monitoring well installation conducted in Q4 2019</li> <li>- Supplementary revised RIW was submitted on April 26, 2021.</li> </ul>

AOC 11a – Administration Building (also AOC 78 – Administration Building Drainage Channel)	1 <sup>st</sup> Quarter 2016	2 <sup>nd</sup> Quarter 2017	<ul style="list-style-type: none"> <li>- Remedial Investigation (RI) activities began in Q3 2017 and are currently ongoing</li> <li>- Indoor air sampling was conducted in Q3 2020 and Q1 2021</li> <li>- Offsite monitoring well installation currently being coordinated, as proposed in RIR</li> </ul>
AOC 12 – Smith Creek and Detention Basin	3 <sup>rd</sup> Quarter 2016/Supplementary RIW in process	2 <sup>nd</sup> Quarter 2018	<ul style="list-style-type: none"> <li>- Comments received from the NJDEP/USEPA in Q1 2017</li> <li>- RTC submitted in Q2 2017</li> <li>- Additional comments &amp; meeting in Q2 2017</li> <li>- RTC submitted Q4 2017</li> <li>- Sediment &amp; surface water investigation conducted in 2018 &amp; 2019</li> <li>- Soil investigation and monitoring well installation conducted in Q3 2019</li> <li>- Supplementary revised RIW is currently being prepared for submittal in Q3 2021</li> </ul>
AOC 19 – QC Laboratory	2 <sup>nd</sup> Quarter 2016 (revised RIW)	2 <sup>nd</sup> Quarter 2016	<ul style="list-style-type: none"> <li>- RIR/RAR submitted in Q2 2017</li> <li>- Comments received from the NJDEP/USEPA in Q3 2017</li> <li>- RTC submitted Q3 2017</li> <li>- Revised RIR/RAR Q1 2018</li> <li>- Meeting in Q2 2018</li> <li>- Revised RIR/RAR submitted in Q3 2019 &amp; approved Q4 2019</li> <li>- Remedial Action Permits (RAPs) for soil &amp; groundwater have been submitted to NJDEP Site Remediation (on January 6, 2021) for review prior to submittal</li> </ul>

			<ul style="list-style-type: none"> <li>- Deed Notice has been approved by NJDEP and USEPA in Q1 2021 and was filed with the county</li> <li>- Meeting was held with the NJDEP/EPA on May 18, 2021 and some additional supplemental sampling was requested prior to submitting the RAPs to NJDEP Permitting</li> <li>- Sampling and RAP submittal is scheduled for Q3 of 2021</li> </ul>
AOC 103 – Fire Pits / Fire Training Area	1 <sup>st</sup> Quarter 2021 (SI)/RIW - 2 <sup>nd</sup> Quarter 2021		<ul style="list-style-type: none"> <li>- Site Investigation Workplan (SIW) submitted in Q2 2019</li> <li>- Comments received from NJDEP/USEPA in Q2 2019</li> <li>- Teleconference and quarterly progress meeting in Q2 2019</li> <li>- RTC submitted on June 24, 2019</li> <li>- Revised SIW submitted in Q4 2019 and approved Q4 2019</li> <li>- Seven (7) groundwater monitoring wells installed and sampled in Q1 2020.</li> <li>- A PowerPoint presentation summarizing the investigation and recommendations for further investigation was provided to the NJDEP and USEPA on April 9, 2020 and discussed during a teleconference on June 29, 2020</li> <li>- NJDEP provided additional comments on July 7, 2020 and a response was submitted on August 18, 2020</li> <li>- RIW submitted on April 26, 2021</li> </ul>
AOC 16b – Marine Terminal Loading Area & AOC 85 – Marine VRU (RIW also includes area AOCs)	3rd Quarter 2021	-	<ul style="list-style-type: none"> <li>- A supplemental RIR/RIW was submitted in Q2 2020</li> <li>- Due to the current owner's(Buckeye Partners, L.P. [Buckeye]) proposed solar field installation project, the Q1 2021 submitted report was rescinded to split out the solar field project AOCs.</li> <li>- These AOCs are being prepared in a separate RIW, submitted in Q3 2021.</li> </ul>

Tankfields – AOC 6 – HSWA UST, AOC 14a – First Tankfield, AOC 46 – Slop Gasoline Unloading Area, AOC 53 – Second Tankfield, AOC 54 – Third Tankfield, AOC 56 – Second Reserve Tankfield	2 <sup>nd</sup> Quarter 2021	-	<ul style="list-style-type: none"> <li>- A supplemental RIR/RIW was submitted in Q2 2020</li> <li>- The supplemental RIR/RIW was rescinded for revisions</li> <li>- The supplemental revised RIW has been prepared and was submitted on May 10, 2021.</li> </ul>
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As a response to the findings of the Preliminary Assessment/Site Investigation (PA/SI) conducted at the HC-PR property, RIWs have been submitted, or are in the process of being submitted, to the NJDEP and USEPA (summarized in the above table).

In addition to the above priority AOCs, a RIW is currently being prepared for other Site AOCs as well. The following is a list of the AOCs included in Former Refining Area Remediation Management Unit RIW that was submitted on May 20, 2021:

- Former Refining Area Remediation Management Unit
  - AOC-9 Alkylation Unit (Sewer Line)
  - AOC-18 Dimersol Unit
  - AOC-20a T1600-A and T-1600B Transformers
  - AOC-20b T510-A and T510-B Transformers
  - AOC-25 X-1950A and X-1950B (Alkylation Neutralization Basin)
  - AOC-26 D-1104 (MEA Sump)
  - AOC-27 EADC Sump
  - AOC-28 Cooling Water Tower
  - AOC-30 Sulfur Pit
  - AOC-31 Brine Pit
  - AOC-32 X-1951 (SRU Neutralization Basin)
  - AOC-38 NH3 Truck Loading Rack/Ammonia Area
  - AOC-39 EADC Truck Unloading Area
  - AOC-40 Fresh Acid Unloading Area
  - AOC-45 Former Sulfur Recovery Unit Truck Loading Rack
  - AOC-47 Bleach Truck Unloading Area
  - AOC-58 Former Chemical Storage Area
  - AOC-59 API Storage Area

- AOC-60 Avenue B Tank Field
- AOC-80 Former Crude Topping Unit
- AOC-88 Compressor Building
- AOC-89 Cracking Tower
- AOC-92 TK-701A and TK-701B
- AOC-96 Boiler Area
- AOC-99 Chemical Storage Area
- AOC-117 Diesel Powered Emergency Generator - Millwright's Shop

## 2.1 Groundwater Gauging

Earth Systems conducts Monthly Gauging Events as part of the Interim Remedial Measures (IRMs) at the HC-PR facility. Monthly gauging events target monitoring wells with a history of LNAPL or sheen and wells in close proximity to LNAPL or sheen detections. During Q2 2021, Earth Systems conducted gauging on a bi-weekly basis due to the presence of LNAPL and discontinuous sheens.

### Bi-Weekly Gauging

Groundwater gauging is currently conducted for the following thirty-four (34) monitoring wells: (PL-1RR, PL-2, PL-3R, PL-4RR, PL-5R, PL-6R, PL-7, PL-8R, PL-9R, TF-1, TF-2, TF-3, TM-6R, TM-7, TR-1R, TR-2R, TR-3RR, TR-3D, TR-3DD, TR-4R, TR-4D, TR-4DD, TR-5, TR-5D, TR-5DD, TR-6, TR-6D, FA-1, FA-2, FA-3, FA-4, FA-5, FA-6, and FA-7), two (2) recovery sumps (TR-Sump-1 and TR-Sump-2), the interceptor trench, and six (6) surface water gauges (DB-SW, LN-SW, L1-SW, SC-SG-1, SC-SG-1A, and SC-SG-2).

All monitoring wells are gauged by utilizing a Solinst oil/water interface probe and measured from a surveyor's mark (present on the top of the inner casing) to the top of the groundwater table.

During the Q2 of 2021, bi-weekly gauging was conducted in April, May, and June (summarized below). The results of the gauging activities are provided in **Table 1** and on **Figures 6, 7, and 8**. A semi-annual site-wide gauging event was conducted on May 26, 2021. The results of the site-wide gauging event are provided in **Table 2** and on **Figure 9**. Historic LNAPL levels are summarized in **Table 4**.

For reference purposes, all site monitoring well documentation has been compiled into a comprehensive Well Manual. The Well Manual includes the following:

- Master Well Construction Details Summary Table
- Well Permits
- Well Records
- Geologic Well Logs
- Form B's

The results of the Q2 2021 monthly groundwater gauging events are summarized below:

- During the April 2021 gauging events, a measurable thickness of LNAPL was encountered in the interceptor trench and monitoring wells FA-5 and TF-2. The LNAPL observed in the monitoring wells ranged from 0.01 (TF-2) to 0.02 feet (FA-5). A discontinuous sheen was encountered in monitoring wells PL-1RR, TF-1, TF-2, TM-7, and TR-2R. Please note, that a discontinuous sheen is defined as an observable amount of product on the surface of the water table that is broken or intermittent and does not cover the majority of the water surface and measures less than 0.25 mm thick.
- During the May 2021 gauging events, due to construction by the current owner (Buckeye), TF-1, TF-2, and TF-3 were inaccessible. A measurable thickness of LNAPL was encountered in the interceptor trench and monitoring well FA-5, at a level of 0.02 feet. A discontinuous sheen was encountered in monitoring wells PL-1RR, TR-2R, and TM-6R.
- During the June 2021 gauging events, a measurable thickness of LNAPL was encountered in the interceptor trench and monitoring well FA-5, at a level of 0.01 feet, less than the level observed during the previous months. A discontinuous sheen was encountered in monitoring well PL-1RR, PL-5R, TF-2, and FA-3.

An analysis of groundwater elevations indicate that groundwater flow direction is generally to the south and east, consistent with historic groundwater flow direction on the site and the Port Reading Conceptual Site Model (CSM).

## 2.2 LNAPL IRM

Currently, passive LNAPL recovery methods and scheduled vacuum extraction events are being utilized at the site. Absorbent booms are placed in impacted wells and replaced as necessary. All used booms are placed in a 55-gallon drum and staged on-site. Once at capacity, the drum is removed from the HC-PR site and disposed at a licensed waste disposal facility. Vacuum extraction events are scheduled, if necessary, to address LNAPL observed in the interceptor trench and monitoring wells FA-5 and PL-5R. Two vacuum extraction event were conducted in Q2 2021. On May 20, 2021, 323 gallons of petroleum impacted water was removed from the interceptor trench and PL-5R. On June 15, 2021, 60 gallons of petroleum impacted water was removed from the interceptor trench. Disposal documentation is included in **Appendix A**.

During the Q2 2021 gauging events, a product sample from monitoring well FA-5 and TF-2 was collected and submitted to the laboratory on April 23, 2021. Based on the fingerprinting analysis, a match for Diesel/No. 2 fuel oil and other patterns was confirmed. The laboratory report is included in **Appendix B**.

### Monitoring Well PL-5R IRM

Historic product levels detected in monitoring well PL-5R are being evaluated to determine the additional investigation and remediation requirements that are necessary to address the LNAPL observed intermittently within this well. An IRM Scope of Work (SOW) for well PL-5 will be provided to the NJDEP and USEPA for review in Q3/Q4 2021.

The monitoring well will continue to be monitored as part of ongoing IRM conducted at the site.

#### Tankfield 3 Incident

On February 24, 2021, Hess/Earth Systems was notified by Buckeye personnel that LNAPL was observed in Tankfield 3. The impacted area measured 70 by 25 feet, located to the southeast of Tank 1216. Earth Systems mobilized to the Site and observed two (2) different types of petroleum fluids: a flowable liquid and a more viscous fluid. Samples were collected of both fluids on February 25, 2021 and sent to SGS Laboratory for fingerprint analysis. The liquid substance was a match for a mixture of gasoline and motor oil. SGS could not match the viscous fluid with a known petroleum product.

Earth Systems identified Buckeye personnel addressing the product by working to dewater the tankfield. Stormwater was being vacuum extracted from the tankfield and transferred to a frac tank for settling and offsite disposal of LNAPL. In addition, absorbent booms were placed in the tankfield to isolate and contain the area of observed LNAPL.

Earth Systems inspected the area daily and changed out absorbent booms and/or pads as necessary. All spent booms and pads were placed into a drum for offsite disposal. Based on field observations and information from Buckeye, no LNAPL migrated outside of the tankfield. LPH has not been observed at the surface of Tankfield 3 since March 3, 2021. A total of two (2) drums of spent sorbent booms and pads (from February) have been generated and were disposed of by ACV, on behalf of Hess. The disposal event was completed on March 8, 2021.

Removal of visually impacted stone is currently being coordinated. Once all visually impacted stone is removed for off-site disposal, a letter report will be prepared by Earth Systems/Hess documenting the remedial actions taken to address the incident. The potential source of the incident will also be further evaluated during implementation of the Tankfields Remedial Investigation Workplan, which was submitted on May 10, 2021 and is currently being reviewed by the NJDEP and EPA.

### **3.0 Groundwater Monitoring**

On April 13, 14, and 15, 2021, groundwater samples were collected via low-flow sampling methodology in accordance with the NJDEP's *Field Sampling Procedures Manual (FSPM)* at the three (3) Landfarm locations (No.1, North, and South Landfarms).

Samples were collected in laboratory supplied glassware and transferred to SGS Laboratories (SGS) of Dayton, New Jersey (NJ NELAP Certification No. 12129) under strict chain of custody procedures.

Analytical results will be provided in the Semi-Annual Report only, which will be submitted in July 2021.

### **4.0 Areas of Concern and Solid Waste Management Units Update**

As discussed previously, a PAR and SIR were submitted to the NJDEP and USEPA on October 9, 2015 and November 7, 2015, respectively. The SIR described the soil and groundwater investigation activities conducted on the site. Several RIW's were submitted subsequent to the SI for select AOCs. The following is a brief summary of any remediation investigation activities conducted during Q2 2021.

#### Site-wide Gauging Event

The semi-annual site-wide gauging event was conducted on May 26, 2021. A summary table of the gauging event is included in **Table 2**.

#### AOC 10 & 57 – Truck Loading Rack & Day Tankfield

A Supplemental revised RIW was submitted to the NJDEP/USEPA on April 26, 2021. The RIW included adjacent AOCs which are discussed in Section 2.0.

#### AOC 11a – Administration Building

Indoor air sampling was conducted in March 2021 and the analytical results have been provided to the NJDEP and USEPA on April 28, 2021.

#### AOC 12 – Smith Creek and Detention Basin

A Supplemental revised RIW is currently being prepared for submittal in Q3 2021.

#### AOC 19 – QC Laboratory & AOC 90 – Former Drum Compound

The NJDEP has completed their review of the draft RAP applications for soil and groundwater and has requested additional groundwater sampling (May 18, 2021 meeting). The additional sampling is being conducted in Q3 2021 and the updated RAP applications will be submitted to the NJDEP permitting department once the supplemental data is available.

#### AOC 103 – Fire Pits/Fire Training Area

The SIW for AOC 103 was implemented in Q1 2020. A PowerPoint presentation summarizing the investigation and recommendations for further investigation was provided to the NJDEP and USEPA on April 9, 2020. A teleconference was conducted with the USEPA, NJDEP, Hess, and Earth Systems on June 29, 2020 to discuss the SI

activities. The NJDEP provided additional comments on July 7, 2020 and a Hess/Earth Systems response was provided on August 18, 2020. The NJDEP provided comments to the August 2020 response on November 11, 2020. This AOC was included in the Marine Loading Dock Area RIW, which was initially submitted to the NJDEP on March 3, 2021, for expedited review. The RIW has been revised for resubmission and has been split into two (2) RIWs (Marine Loading Terminal and Proposed Future Solar Project Area). AOC 103 was included in the Proposed Future Solar Project Area RIW that was submitted to the NJDEP/USEPA on April 26, 2021. The Marine Loading Dock Area RIW was submitted on July 14, 2021.

#### **4.1 AOC 1 – North Landfarm (SWMU)**

Routine groundwater monitoring will continue at the North Landfarm, pending approval and execution of the proposed Closure Plan. A Remedial Action Workplan (RAW) was submitted to the USEPA and NJDEP for the North Landfarm in September 2016. Comments were received from the USEPA and NJDEP on June 7, 2018. A 90% Soil Remediation Action Design (RAD) for the North Landfarm engineering control was submitted to the USEPA and NJDEP on October 24, 2019. The NJDEP and USEPA issued an approval letter for the 90% design on April 28, 2020. The current owner, Buckeye, is in the process of lining the tankfield located directly adjacent to the North Landfarm. The 100% RAD will be finalized once the tankfield lining project is complete and as-built drawings are provided to Hess/Earth Systems.

The updated Groundwater Sampling Plan for the North Landfarm is being prepared with a targeted submittal date in Q3 2021.

#### **4.2 AOC 2 – South Landfarm (SWMU)**

Routine groundwater monitoring will continue at the South Landfarm, pending approval and execution of the proposed Closure Plan. A RAW was submitted to the USEPA and NJDEP for the South Landfarm in September 2016. Comments were received from the USEPA and NJDEP on March 20, 2019 and a response is currently being prepared and targeted for submittal in 2021.

The updated Groundwater Sampling Plan for the South Landfarm is being prepared with a targeted submittal date in 2021.

#### **4.3 AOC 3 – No. 1 Landfarm (SWMU)**

Routine monitoring (groundwater, soil, and leachate) will continue at the No. 1 Landfarm, pending approval and execution of closure. A RAW was submitted to the USEPA and NJDEP in September 2016 and comments were received from the USEPA and NJDEP on July 9, 2018. A 100% Soil Remedial Action Design for the No. 1 Landfarm engineering control was submitted on May 24, 2019. Comments regarding the 100% engineering control design submittal were received from the NJDEP on October 7, 2019. The comments were addressed by Hess/Earth Systems on November 1, 2019 and the NJDEP subsequently approved the response. The NJDEP and USEPA issued an approval letter of the 100% engineering control design on April 28, 2020.

The following permits were submitted in June 2020 and October 2020 and have been approved by the NJDEP on the dates provided:

- Soil Erosion & Sediment Control Plan (Freehold Soil Conservation District), approved on August 17, 2020
- Flood Hazard Area Individual Permit (NJDEP Land Use Regulation Program), approved on September 25, 2020
- Waterfront Development GP-11 Permit (NJDEP Land Use Regulation Program), approved on September 25, 2020
- Freshwater Wetland GP-4 Permit (NJDEP Land Use Regulation Program), approved on September 25, 2020
- NJPDES B4B Permit (NJDEP Wastewater Program), approved on September 15, 2020
- Treatment Works Approval TWA-1 Permit (NJDEP Wastewater Program), approved on February 18, 2021

The following permit was submitted in September 2020 and the 30-day public comment period is complete and approval is pending.

- NJPDES Individual Permit (NJDEP Stormwater Program), public comment period is over and approval is pending.

The NJDEP Office of Hazardous Waste Compliance & Enforcement observed the Q2 2021 groundwater sampling event and the inspection report is currently pending.

The updated Groundwater Sampling Plan for the No. 1 Landfarm is being prepared with a targeted submittal date in Q3 2021.

## **5.0 Schedule**

### Site-wide LNAPL Monitoring & Recovery

Bi-weekly gauging events continue to be conducted as part of the IRM at the site. In addition, LNAPL will continue to be removed via vacuum truck from both the interceptor trench and select monitoring wells, as necessary. Passive absorbent socks and booms will also continue to be deployed in both the interceptor trench and select monitoring wells, as necessary.

### AOC 10 – Truck Loading Rack and AOC 57 – Day Tankfield

A Supplemental RIR/RIW was submitted in Q1 2020. Based upon subsequent discussions with NJDEP/USEPA pertaining to the Port Reading June 9, 2020 memo (i.e. the “over-arching issues” memo), the RIR/RIW was rescinded and revised to incorporate the additional requested information. The revised RIR/RIW was submitted on April 26, 2021. The proposed investigation activities will be conducted once the revised Supplemental RIR/RIW is reviewed and approved by the NJDEP and USEPA.

#### AOC 12 – Smith Creek and Detention Basin

A Supplemental RIR/RIW was submitted in Q1 2020. Based upon subsequent discussions with NJDEP/USEPA pertaining to the Port Reading June 9, 2020 memo (i.e. the “over-arching issues” memo), the RIR/RIW was rescinded and is being revised to incorporate the additional requested information. The revised RIR/RIW is being targeted for submittal in Q3 2021. The proposed investigation activities will be conducted once the revised Supplemental RIR/RIW is reviewed and approved by the NJDEP and USEPA.

#### AOC 103 – Fire Pits/Fire Training Area

The SIW for AOC 103 was implemented in Q1 2020. A PowerPoint presentation summarizing the investigation and recommendations for further investigation was provided to the NJDEP and USEPA on April 9, 2020. A teleconference was conducted with the USEPA, NJDEP, Hess, and Earth Systems on June 29, 2020 to discuss the SI activities. The NJDEP provided additional comments on July 7, 2020 and a response was provided on August 18, 2020. The NJDEP provided comments to the August 2020 response on November 11, 2020. This AOC has been combined with the Marine Loading Dock Area RIW which was submitted in Q1 2021. Due to the current owner’s plan (at the time) to install a solar field at this section of the property, this RIW was divided into two (2) RIWs (Marine Loading Terminal and Proposed Future Solar Project Area). AOC 103 has been combined with the Proposed Future Solar Project Area RIW; which was submitted on April 26, 2021. The proposed investigation activities will be conducted once the revised Supplemental RIR/RIW is reviewed and approved by the NJDEP and USEPA.

#### AOC 19 – QC Laboratory & AOC 90 – Former Drum Compound

The NJDEP has completed their review of the draft RAP applications for soil and groundwater and has requested some additional sampling (May 18, 2021 meeting). The additional sampling is being conducted in Q3 2021 and the updated RAP applications will be submitted to the NJDEP permitting department once the supplemental data is available.

#### AOC 11a – Administration Building

The RI for AOC 11a is currently ongoing. Potential groundwater investigation activities are currently being evaluated. Indoor air sampling was conducted in March 2021 (prior to the end of the heating season). Analytical results from the sampling event were submitted to the NJDEP and USEPA on April 28, 2021.

#### Former Refining Area Remediation Management Unit

A Supplemental RIR/RIW was submitted in Q2 2020. Based upon subsequent discussions with NJDEP/USEPA pertaining to the Port Reading June 9, 2020 memo (i.e. the “over-arching issues” memo), the RIR/RIW was rescinded and revised to incorporate the additional requested information. The revised RIR/RIW was submitted on May 20, 2021. The proposed investigation activities will be conducted once the revised Supplemental RIR/RIW is reviewed and approved by the NJDEP and USEPA.

#### Former Marine Loading Dock Area

A Supplemental RIR/RIW was submitted in Q1 2021. Based upon subsequent discussions with NJDEP/USEPA, the RIR/RIW was rescinded and divided into two (2) RIWs (Marine Loading Terminal and Proposed Future Solar Project Area). The Marine

Loading Terminal RIW is currently being prepared for a targeted submittal in Q3 2021. The Proposed Future Solar Project Area RIW was submitted on April 26, 2021. The proposed investigation activities will be conducted once the revised Supplemental RIR/RIWs are reviewed and approved by the NJDEP and USEPA.

Tankfields

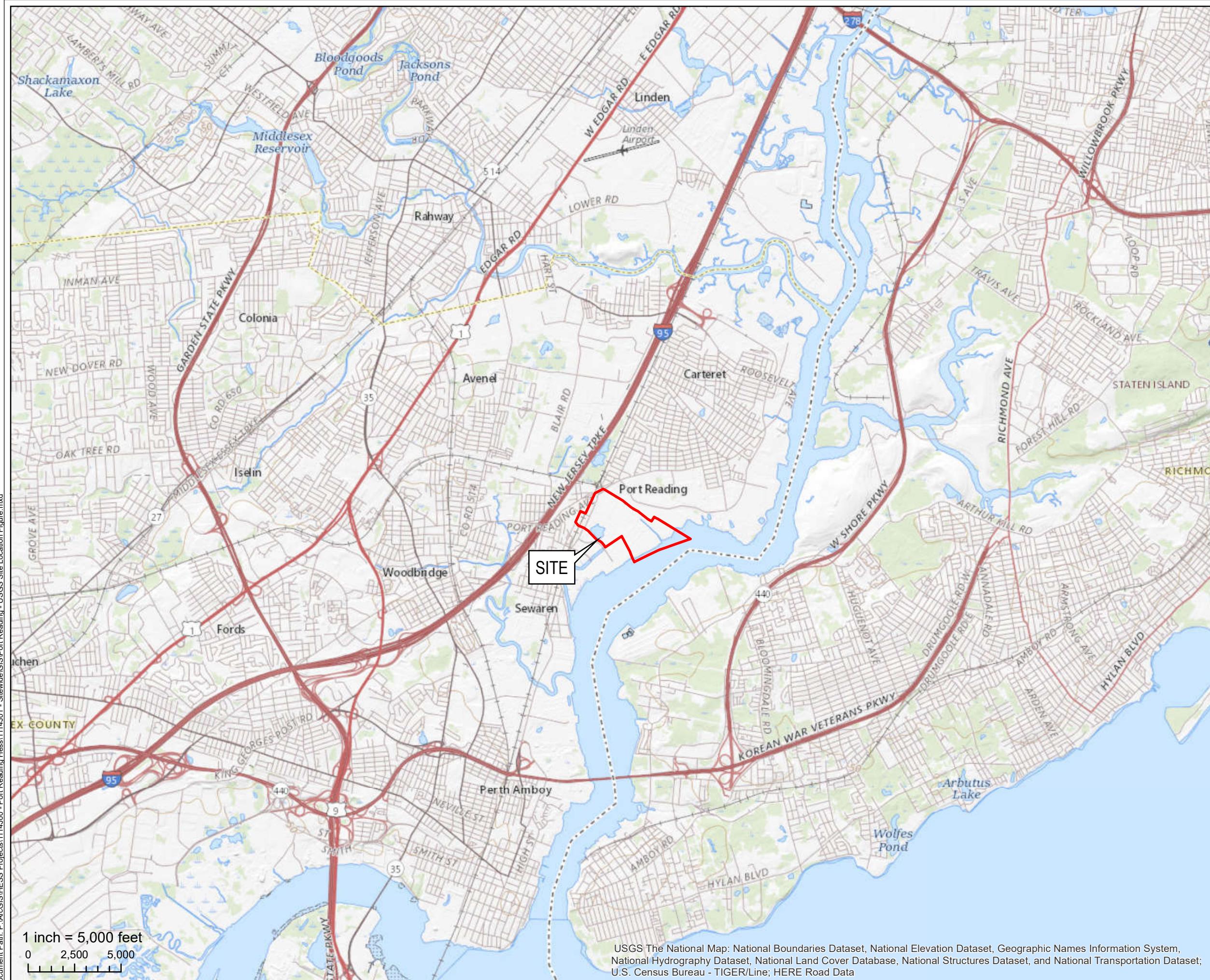
A Supplemental RIR/RIW was submitted in Q2 2020. Based upon subsequent discussions with NJDEP/USEPA pertaining to the Port Reading June 9, 2020 memo (i.e. the “over-arching issues” memo), the RIR/RIW was rescinded and revised to incorporate the additional requested information. The revised RIR/RIW was submitted on May 10, 2021. The proposed investigation activities will be conducted once the revised Supplemental RIR/RIW is reviewed and approved by the NJDEP and USEPA.

Landfarms

The next quarterly sampling event for the North, South, and No. 1 Landfarms is scheduled in July 2021.

Permit coordination is nearly complete for the No. 1 Landfarm. Once all permits are approved, remedial action implementation will begin for the No. 1 Landfarm.

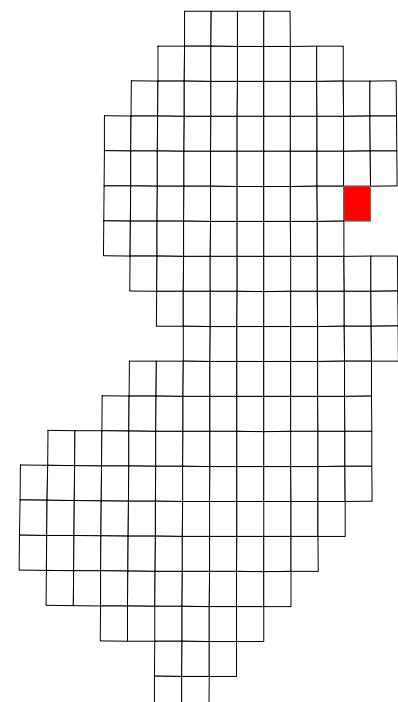
## **Figures**



## LEGEND

  Port Reading Site Boundary

NEW JERSEY QUADRANGLE LOCATION:  
53 - JERSEY CITY, NEW JERSEY



**FIGURE 1:**  
**USGS SITE LOCATION MAP**

**HESS CORPORATION**  
**FORMER PORT READING TERMINAL**  
**750 CLIFF ROAD**  
**PORT READING, NEW JERSEY**

Project #:	1114J01	Drawn:	4/16/2020
SRP PI#:	006148	Drawn By:	KJ

**Earth Systems**

Environmental Engineering  
1625 Highway 71, Belmar, NJ 07719  
T. 732.739.6444 | F. 732.739.0451

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Source: NAD 1983 (2011) New Jersey State Plane FIPS 2900 US FT.

**LEGEND**



-  Site Boundary
-  AOC 12 Extent
-  Basin Present Extents
-  Former Smith Creek Channel
-  Shoreline
-  Bulkhead
- Pipelines**
-  10" Spectra Natural Gas Pipeline
-  12" Spectra Pipeline
-  24" Outfall
-  Buckeye Pipeline
-  Buckeye Petroleum Pipeline - 608
-  Buckeye Petroleum Pipeline - 609
-  Colonial Pipeline
-  Williams Pipeline
-  Sitewide Utilities/Wastewater

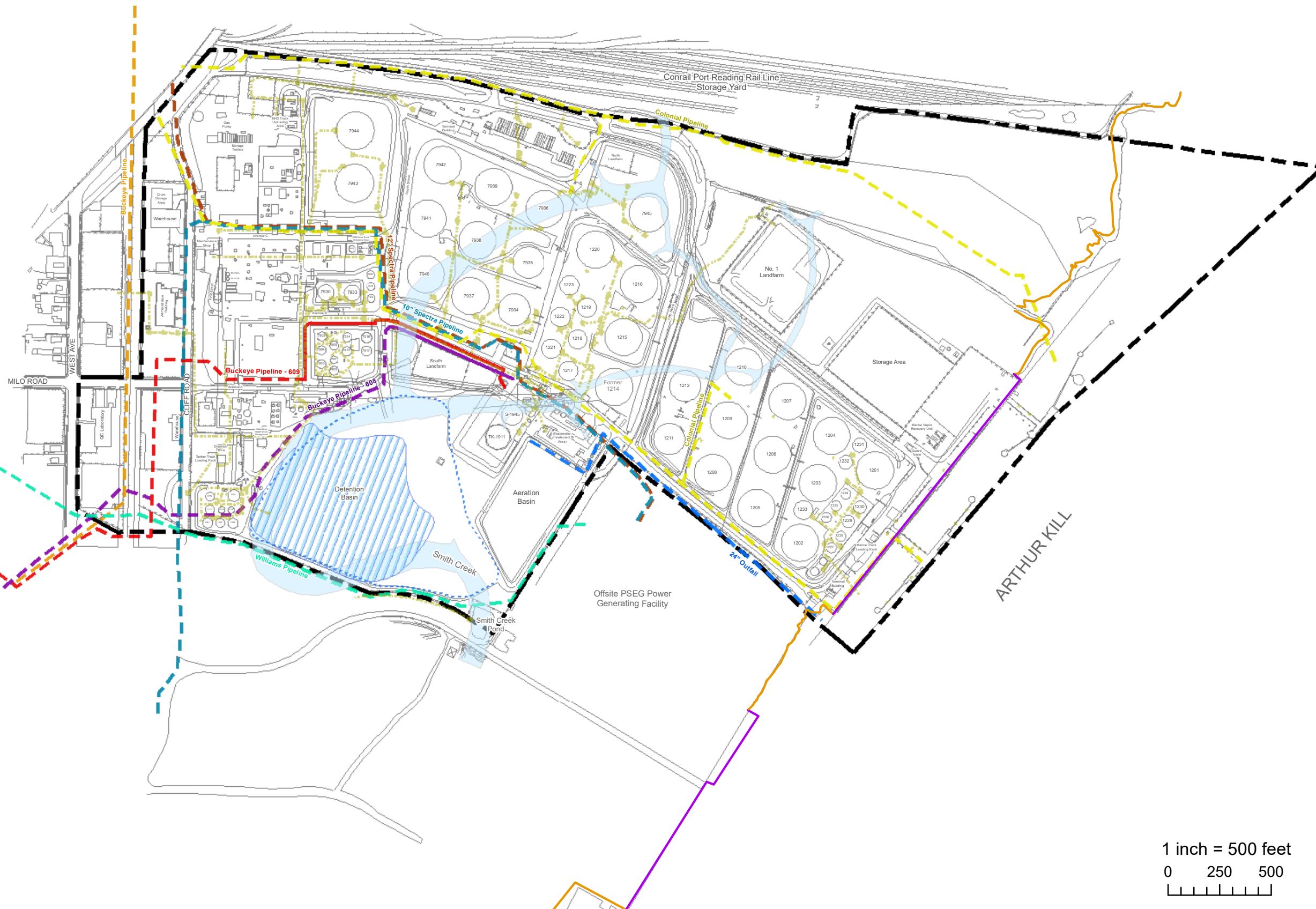
Utility and Pipe Line Note:  
 - Solid Line: Above-ground  
 - Dotted Line: Underground

## FIGURE: 2

### Site Plan

**HESS CORPORATION  
FORMER PORT READING COMPLEX  
750 CLIFF ROAD  
PORT READING, NEW JERSEY**

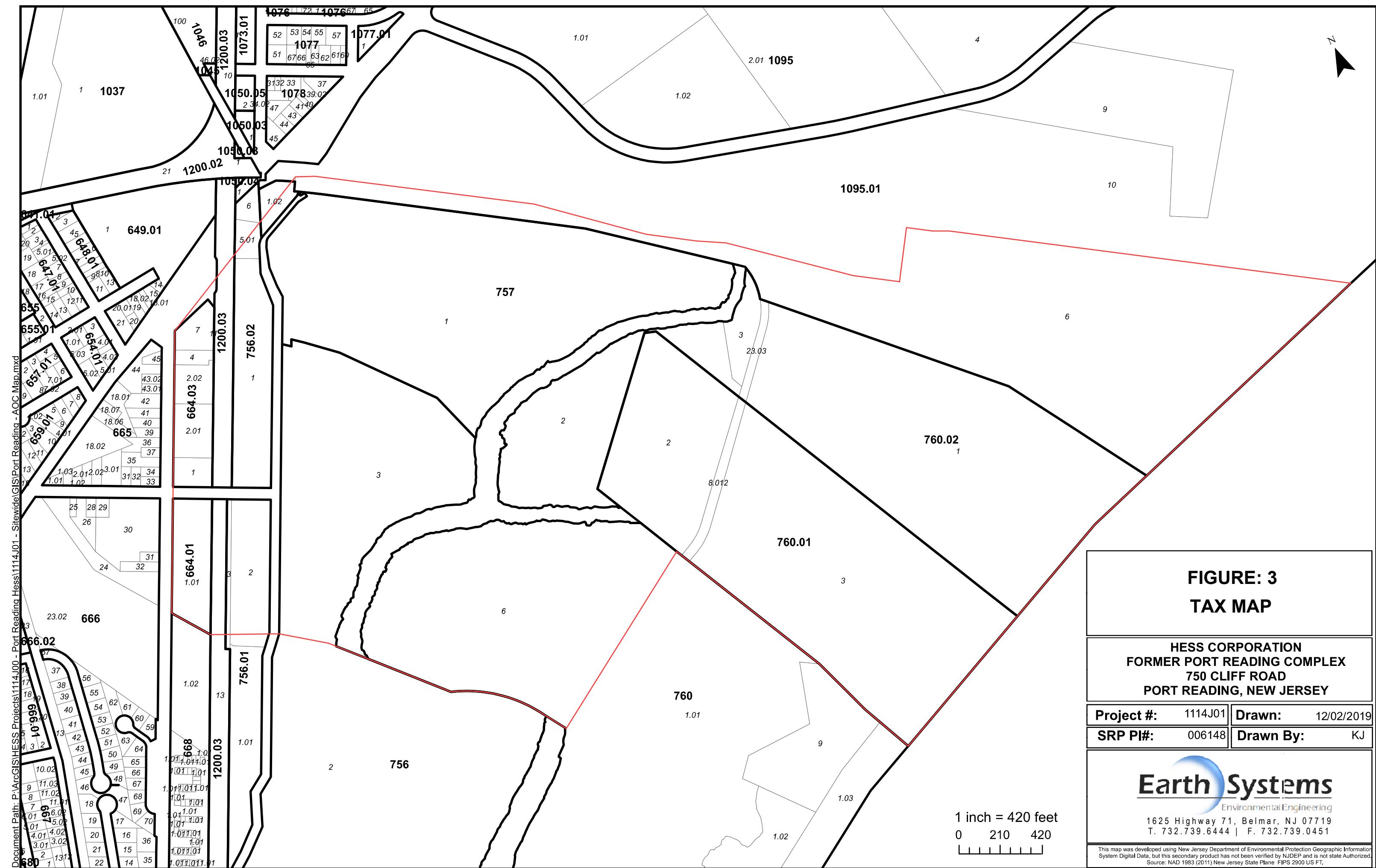
Project #:	1114J01	Drawn:	03/25/2021
SRP PI#:	006148	Drawn By:	AE

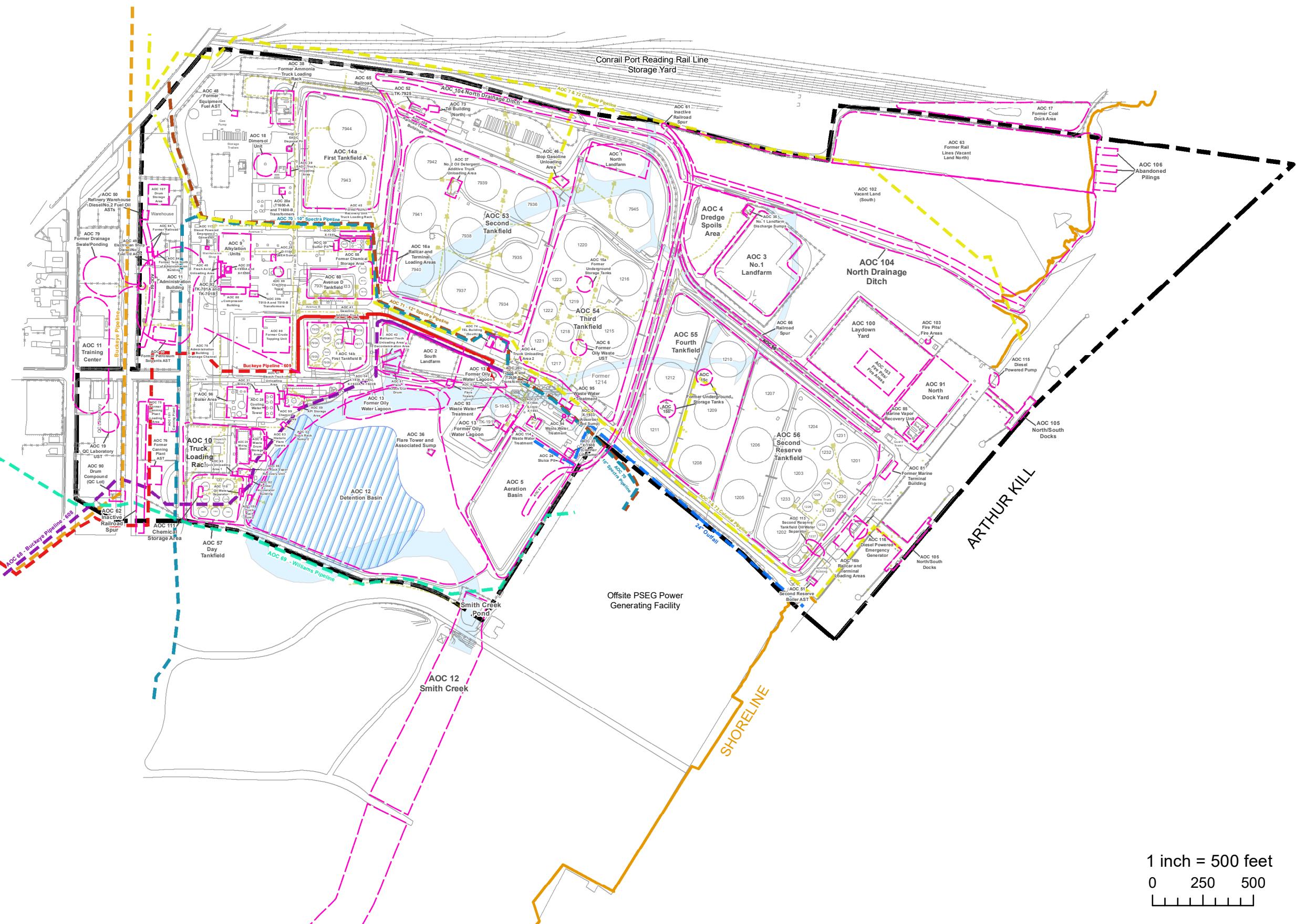


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## LEGEND



- - - AOC Boundary
- - - Sitewide Utilities
- Shoreline
-  Site Boundary
-  Detention Basin Current Extents
-  Former Smith Creek Channel

## Pipelines

- - - 10" Spectra Natural Gas Pipeline
- - - 12" Spectra Pipeline
- - - 24" Outfall
- - - Buckeye Pipeline
- - - Buckeye Petroleum Pipeline - 608
- - - Buckeye Petroleum Pipeline - 609
- - - Colonial Pipeline
- - - Unknown Pipeline/ Utility
- - - Williams Pipeline

Pipelines:  
- Solid Line: Aboveground  
Dotted Line: Underground

## **FIGURE: 4**

### **AREAS OF CONCERN MAP**

**HESS CORPORATION  
FORMER PORT READING COMPLEX  
750 CLIFF ROAD  
PORT READING, NEW JERSEY**

<b>Project #:</b>	1114J01	<b>Drawn:</b>	2/24/2021
<b>SRP PI#:</b>	006148	<b>Drawn By:</b>	KJ/RC

$$1 \text{ inch} = 500 \text{ feet}$$

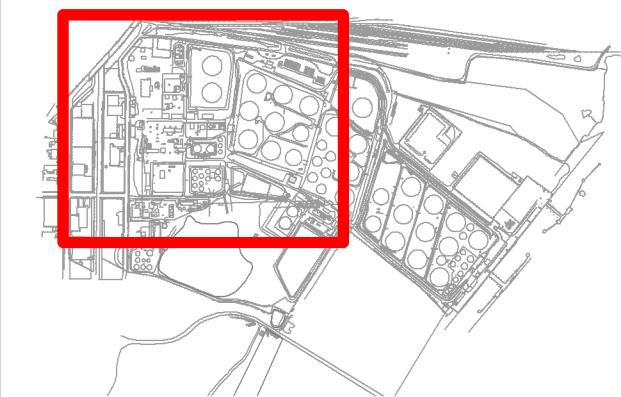

0      250      500

The logo for Earth Systems Environmental Engineering. It features the company name "Earth Systems" in a large, bold, black sans-serif font. The word "Earth" is positioned above "Systems". A blue, semi-transparent sphere is partially visible behind the text. Below the main name, the words "Environmental Engineering" are written in a smaller, blue, serif font.

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## LEGEND

- AOC Boundary
  - Sitewide Utilities
  - Underground Utility Lines
  - Detention Basin Current Extents
  - Site Boundary
- Pipelines**
- 10" Spectra Natural Gas Pipeline
  - 12" Spectra Pipeline
  - 24" Outfall
  - Buckeye Pipeline
  - Buckeye Petroleum Pipeline - 608
  - Buckeye Petroleum Pipeline - 609
  - Colonial Pipeline
  - Unknown Pipeline/ Utility
  - Williams Pipeline
- Pipelines:  
— Solid Line: Aboveground  
— Dashed Line: Underground



**FIGURE: 4.1**  
**AREAS OF CONCERN MAP**

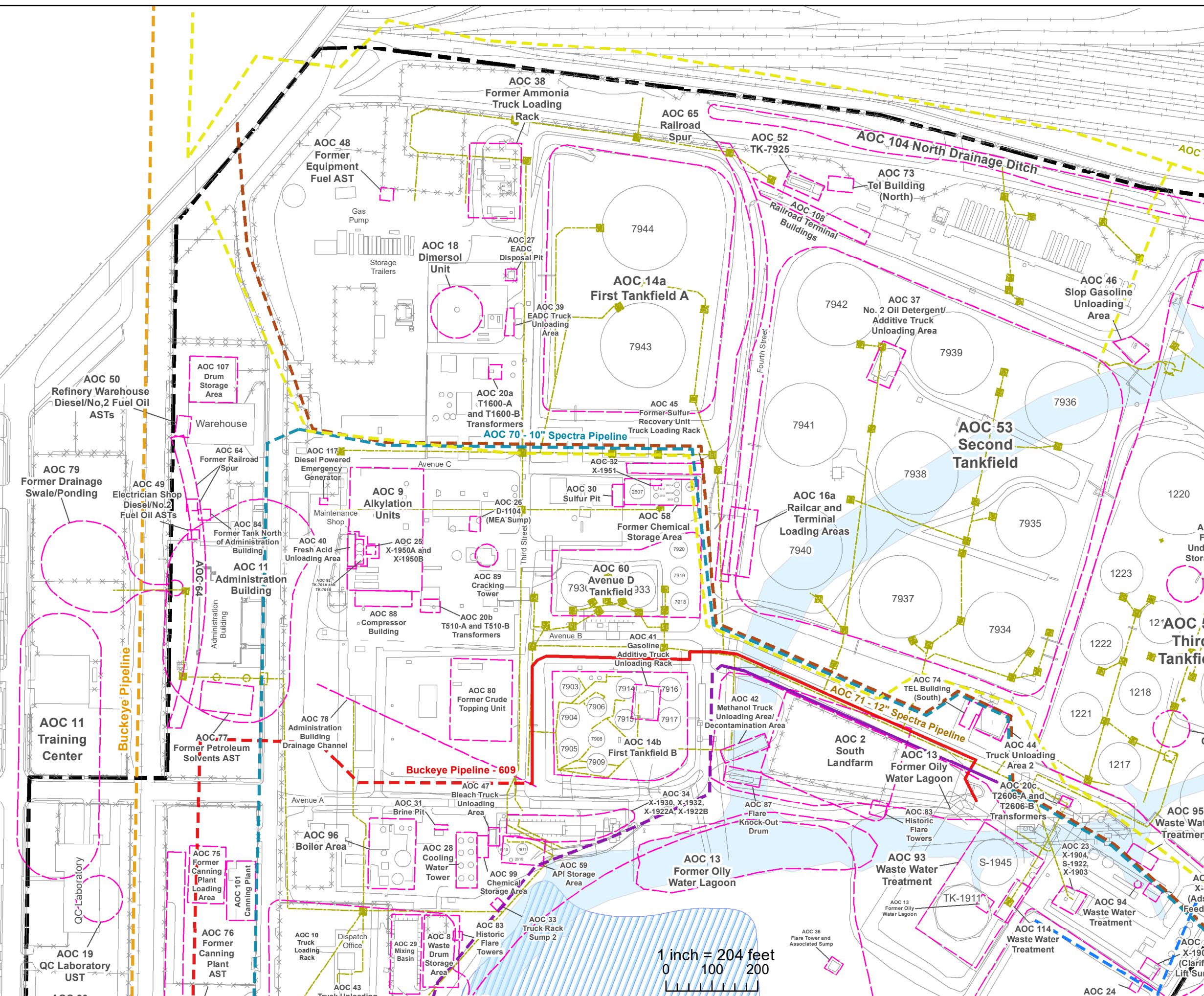
**HESS CORPORATION**  
**FORMER PORT READING COMPLEX**  
**750 CLIFF ROAD**  
**PORT READING, NEW JERSEY**

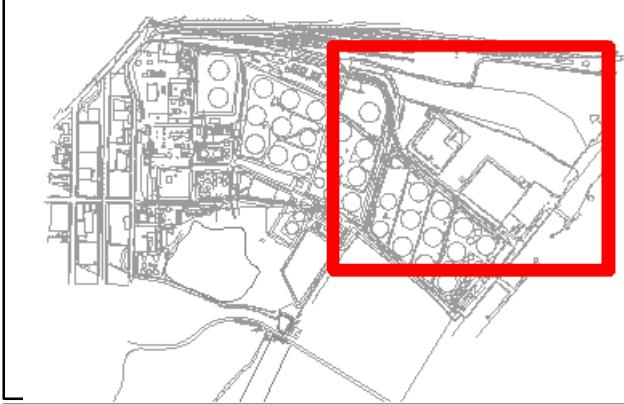
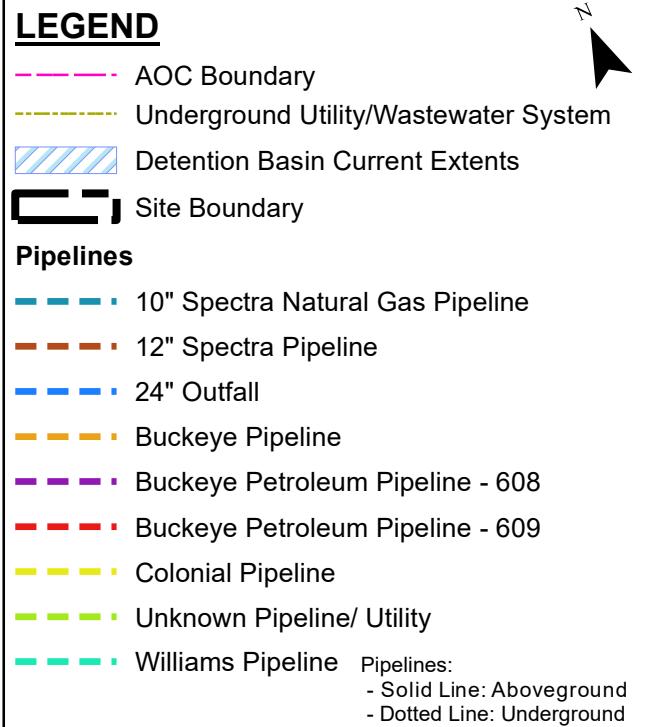
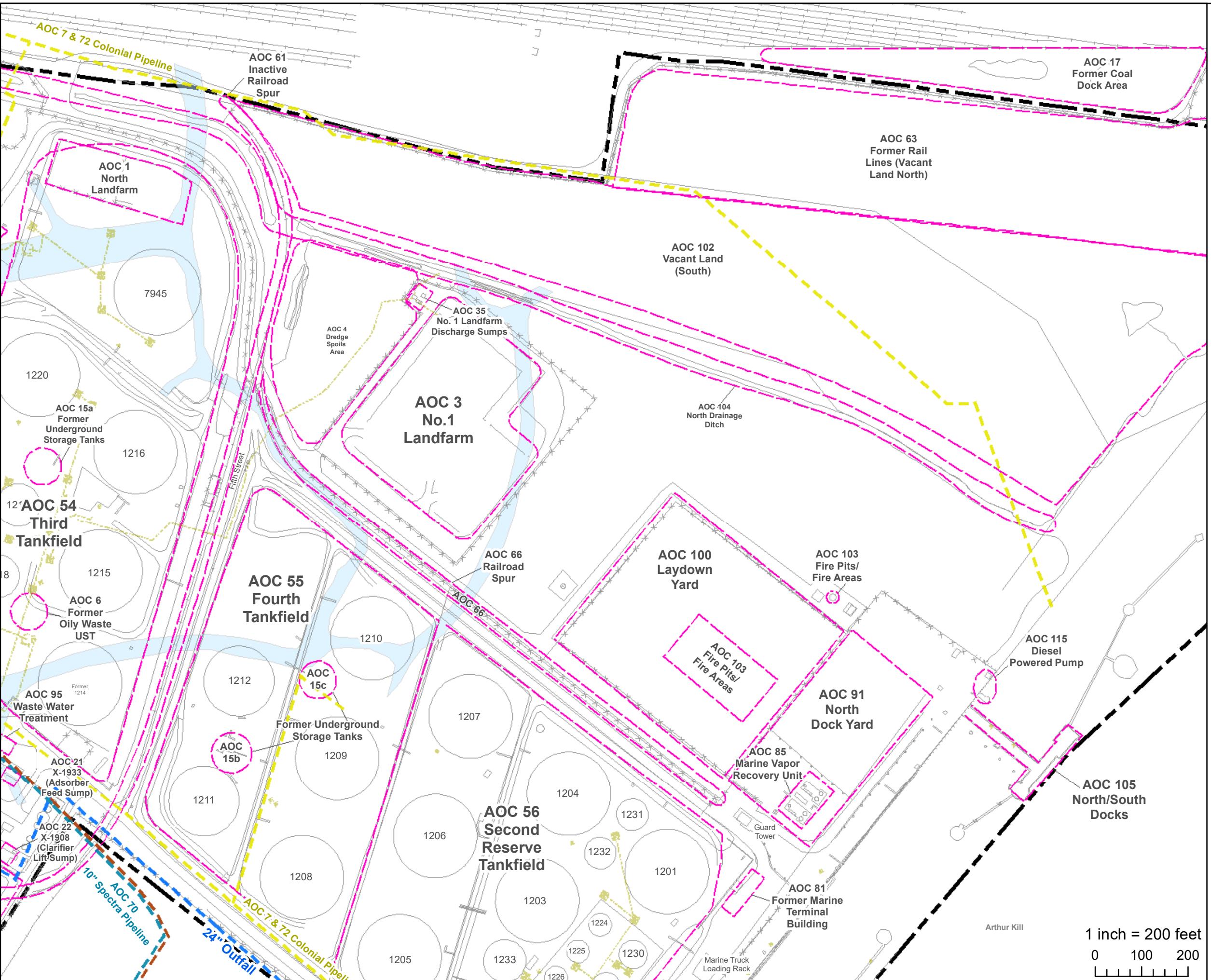
Project #: 1114J01 Drawn: 2/25/2021  
SRP PI#: 006148 Drawn By: KJ,RC

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Source: NAD 1983 (2011) New Jersey State Plane FIPS 2900 US FT.





**FIGURE: 4.2**  
**AREAS OF CONCERN MAP**

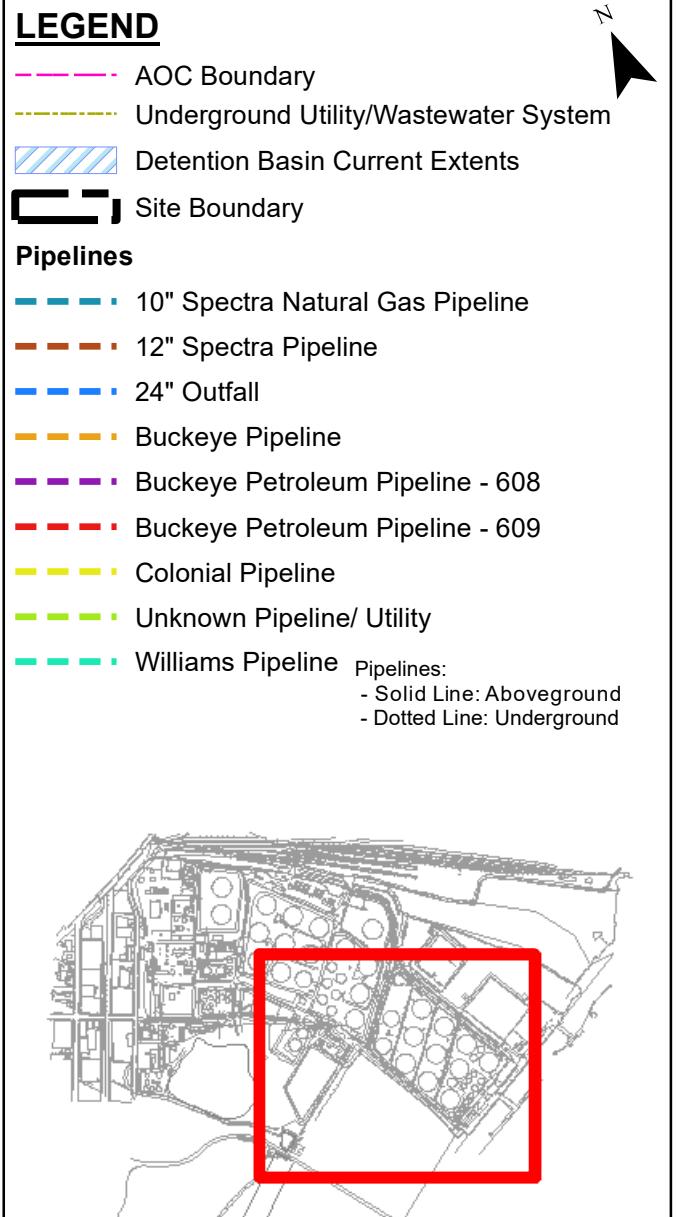
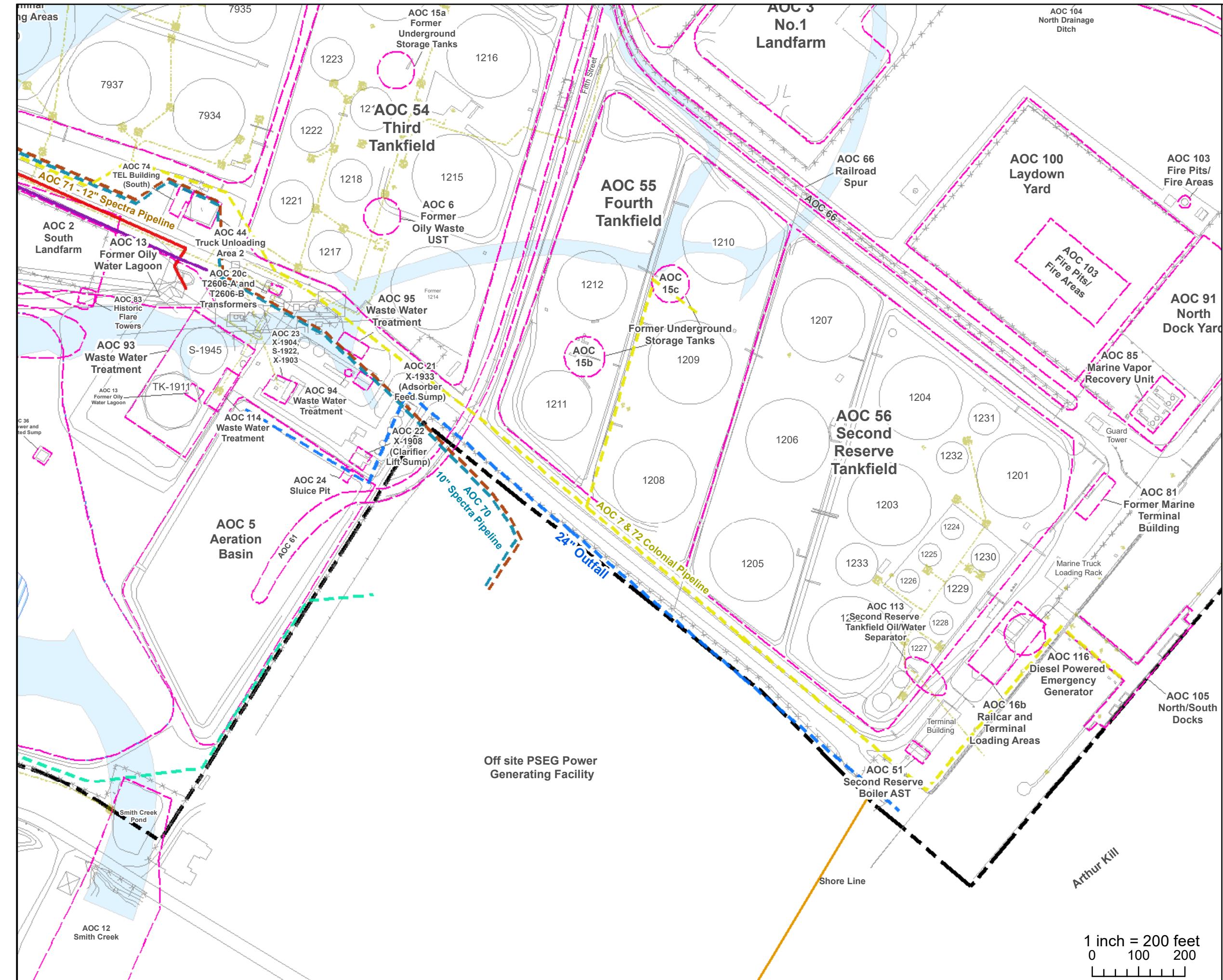
**HESS CORPORATION**  
**FORMER PORT READING COMPLEX**  
**750 CLIFF ROAD**  
**PORT READING, NEW JERSEY**

Project #:	1114J01	Drawn:	2/26/2021
SRP PI#:	006148	Drawn By:	KJ,RC

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**FIGURE: 4.3**  
**AREAS OF CONCERN MAP**

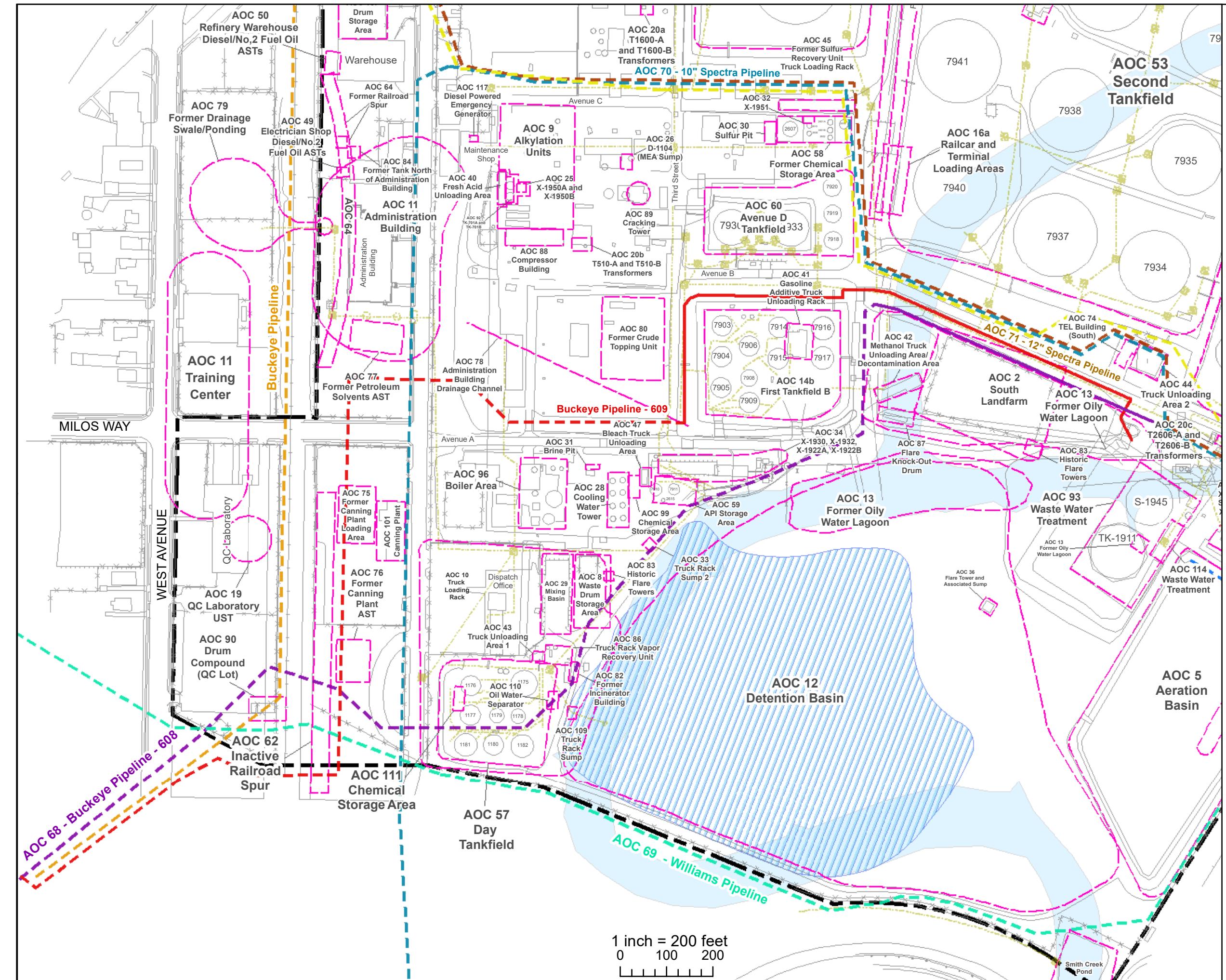
HESS CORPORATION  
FORMER PORT READING COMPLEX  
750 CLIFF ROAD  
PORT READING, NEW JERSEY

Project #:	1114J01	Drawn:	2/23/2021
SRP PI#:	006148	Drawn By:	KJ,RC

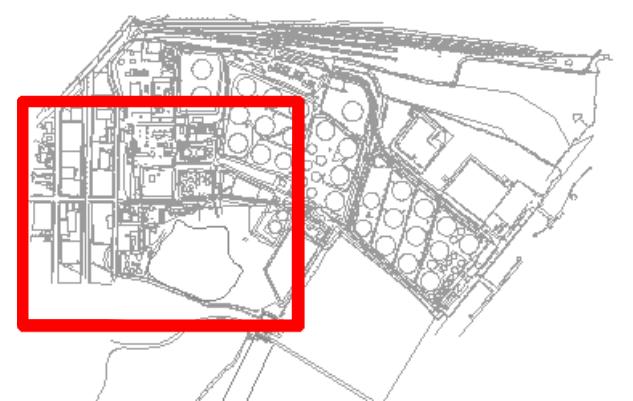
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Environmental Engineering

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Source: NAD 1983 (2011) New Jersey State Plane FIPS 2900 US FT.



LEGEND	
AOC Boundary	Pink dashed line
Underground Utility/Wastewater System	Yellow dashed line
Detention Basin Current Extents	Blue hatched area
Site Boundary	Black line
Pipelines	
10" Spectra Natural Gas Pipeline	Solid blue line
12" Spectra Pipeline	Dashed brown line
24" Outfall	Dashed blue line
Buckeye Pipeline	Dashed yellow line
Buckeye Petroleum Pipeline - 608	Dashed purple line
Buckeye Petroleum Pipeline - 609	Dashed red line
Colonial Pipeline	Dashed green line
Unknown Pipeline/ Utility	Dashed light green line
Williams Pipeline	Dashed cyan line
Pipelines:	
- Solid Line: Aboveground	
- Dotted Line: Underground	



**FIGURE: 4.4**  
**AREAS OF CONCERN MAP**

HESS CORPORATION  
FORMER PORT READING COMPLEX  
750 CLIFF ROAD  
PORT READING, NEW JERSEY

Project #: 1114J01 | Drawn: 2/23/2021  
SRP PI#: 006148 | Drawn By: KJ,RC

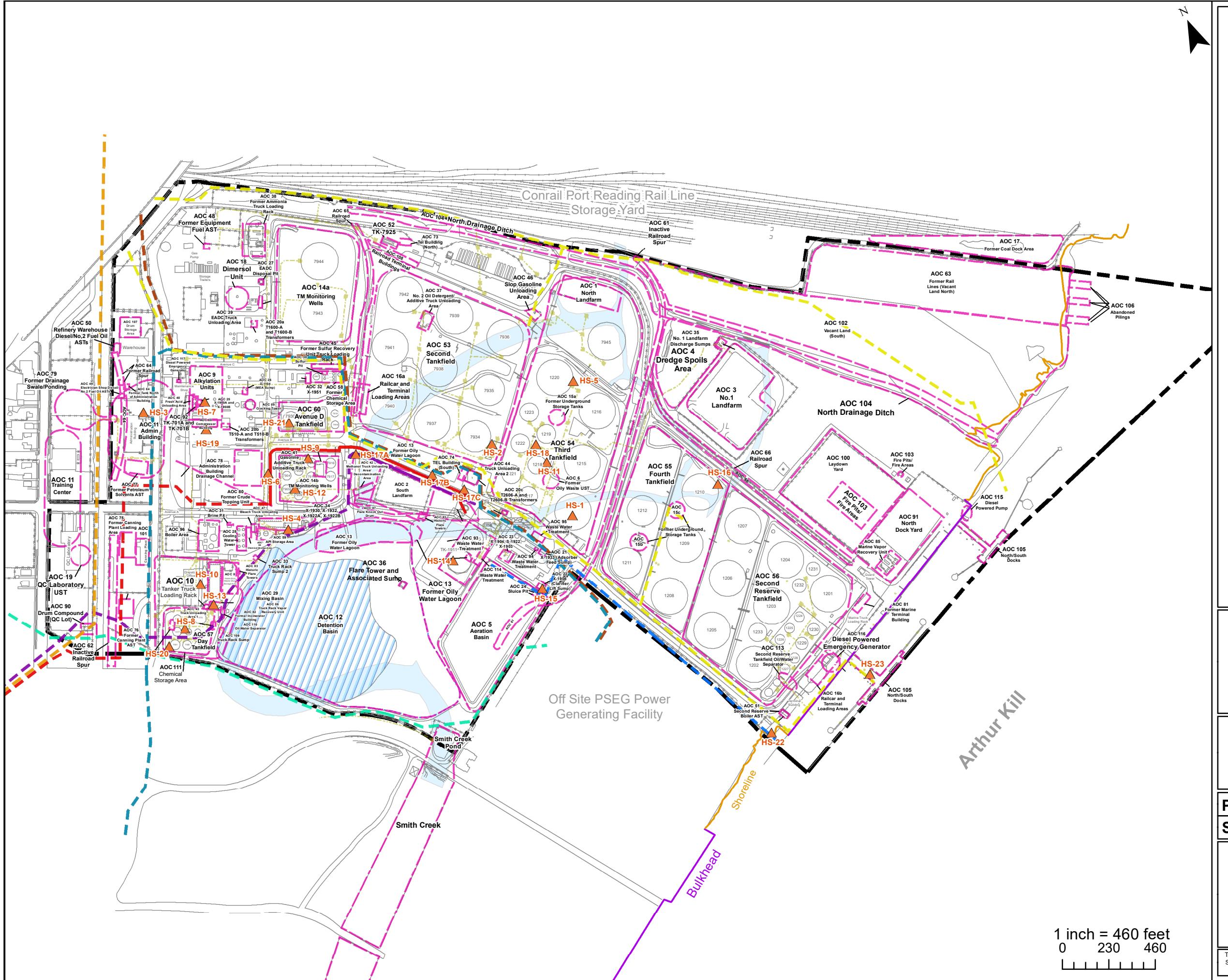
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Source: NAD 1983 (2011) New Jersey State Plane FIPS 2900 US FT.

1 inch = 200 feet  
0 100 200





**FIGURE: 5**  
**HISTORIC SPILL**  
**LOCATION MAP**

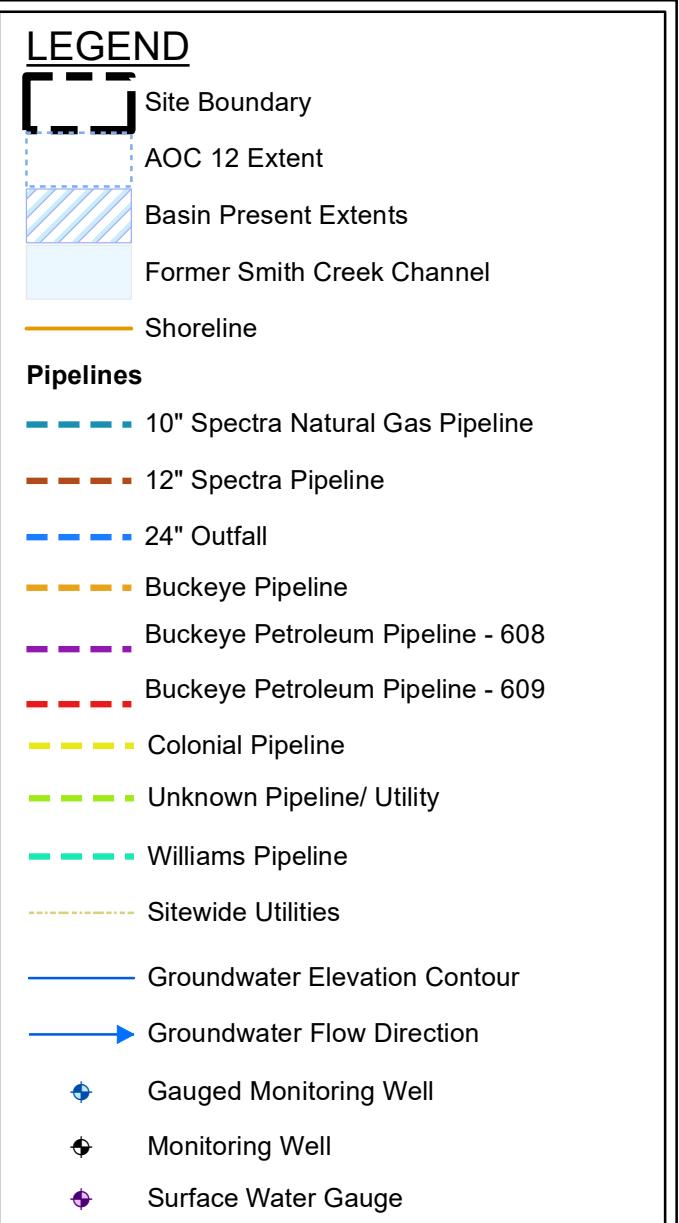
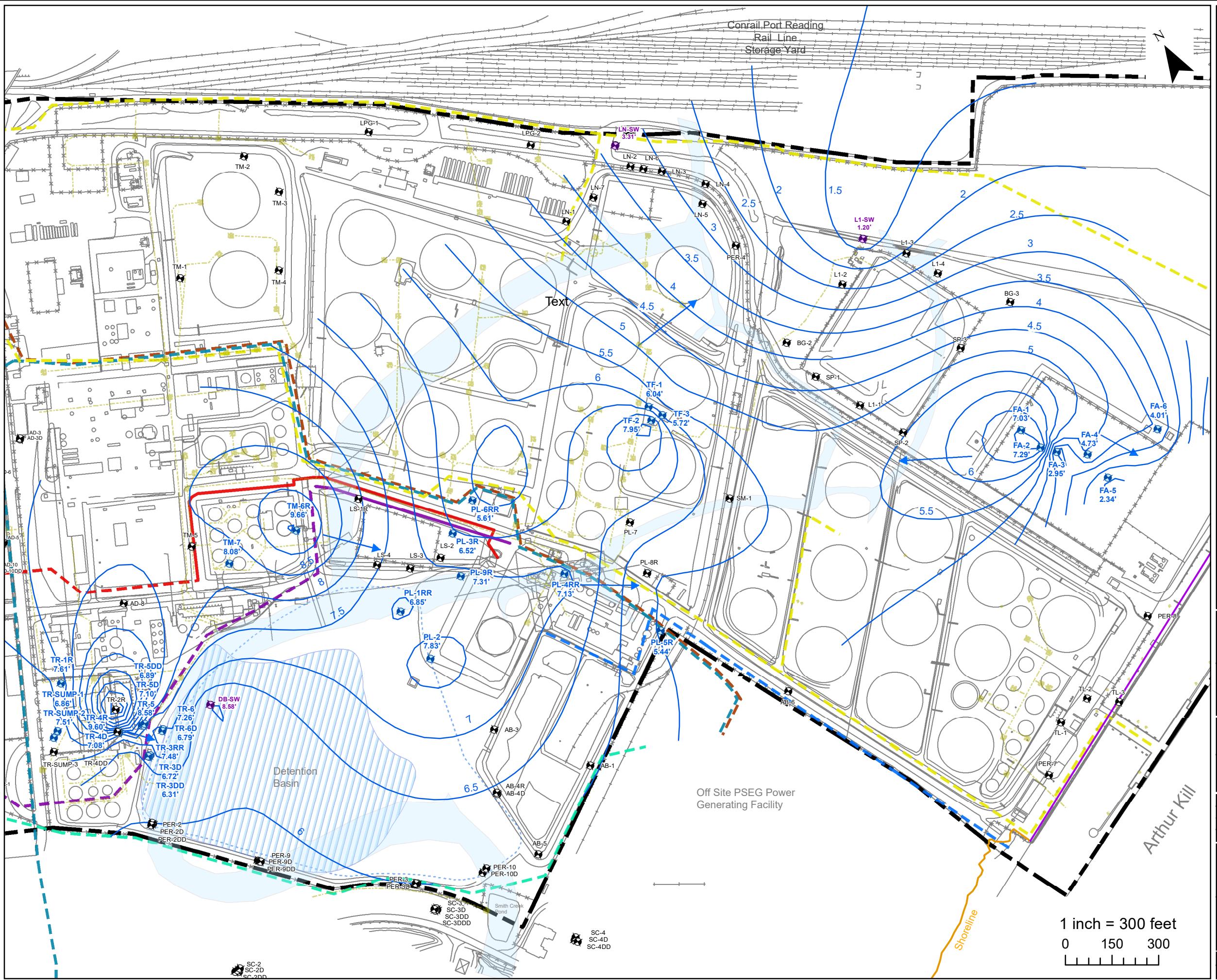
**HESS CORPORATION**  
**FORMER PORT READING COMPLEX**  
**750 CLIFF ROAD**  
**PORT READING, NEW JERSEY**

Project #: 1114J01 Drawn: 04/13/2021  
SRP PI#: 006148 Drawn By: AE



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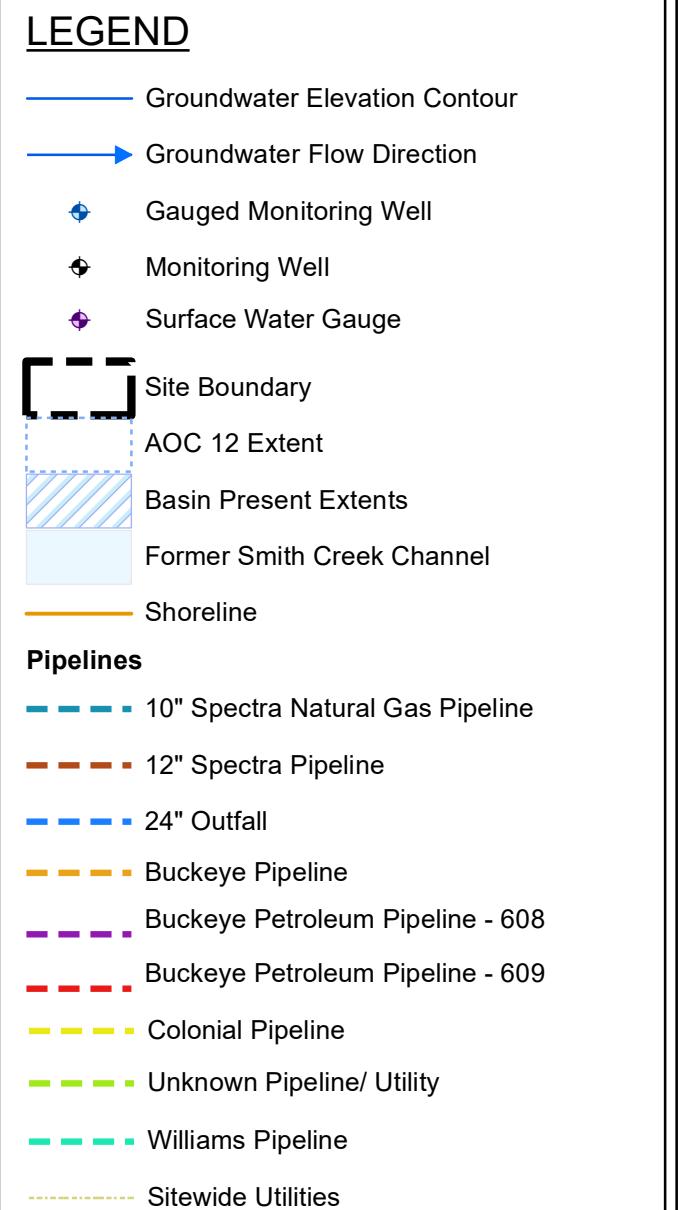
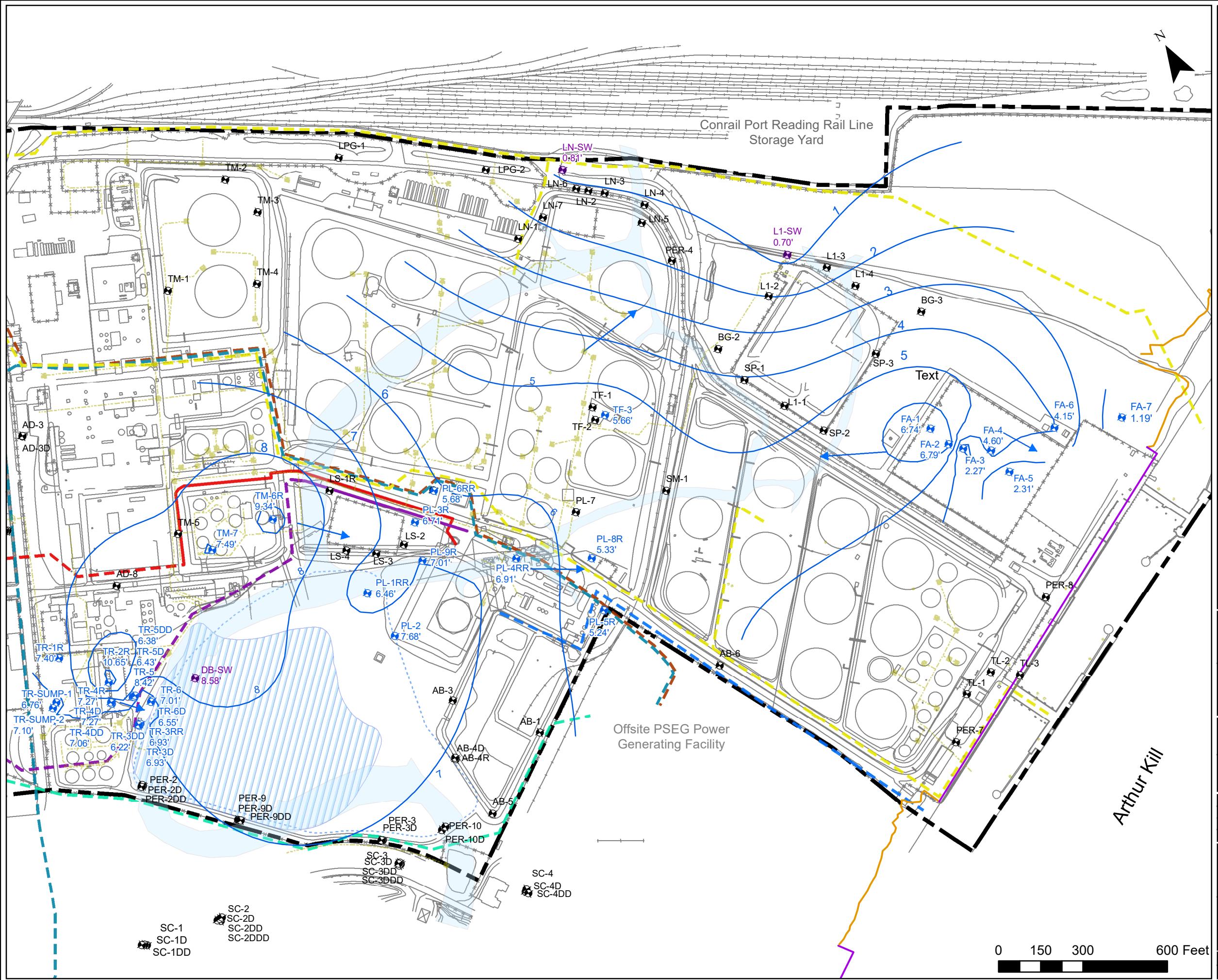
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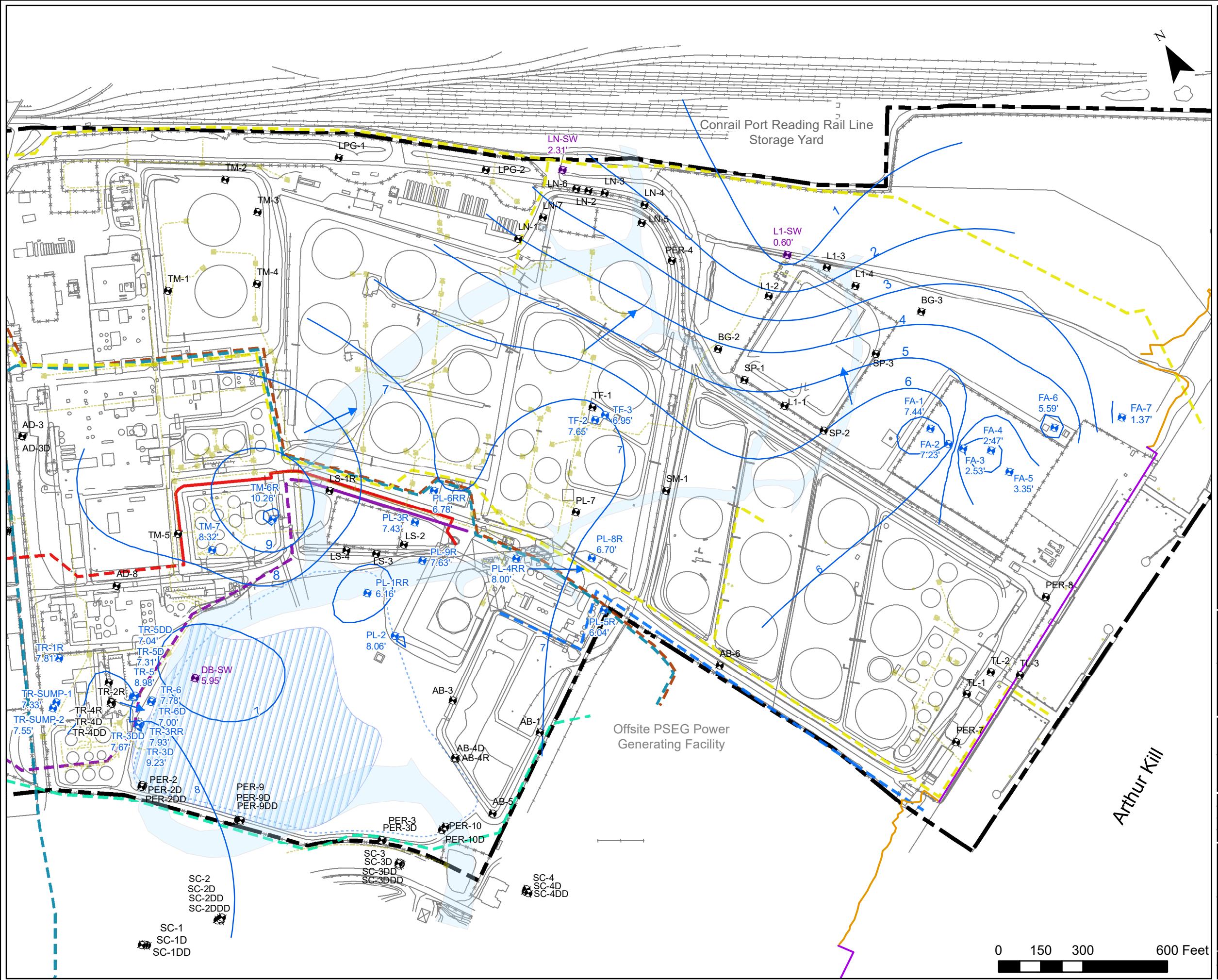


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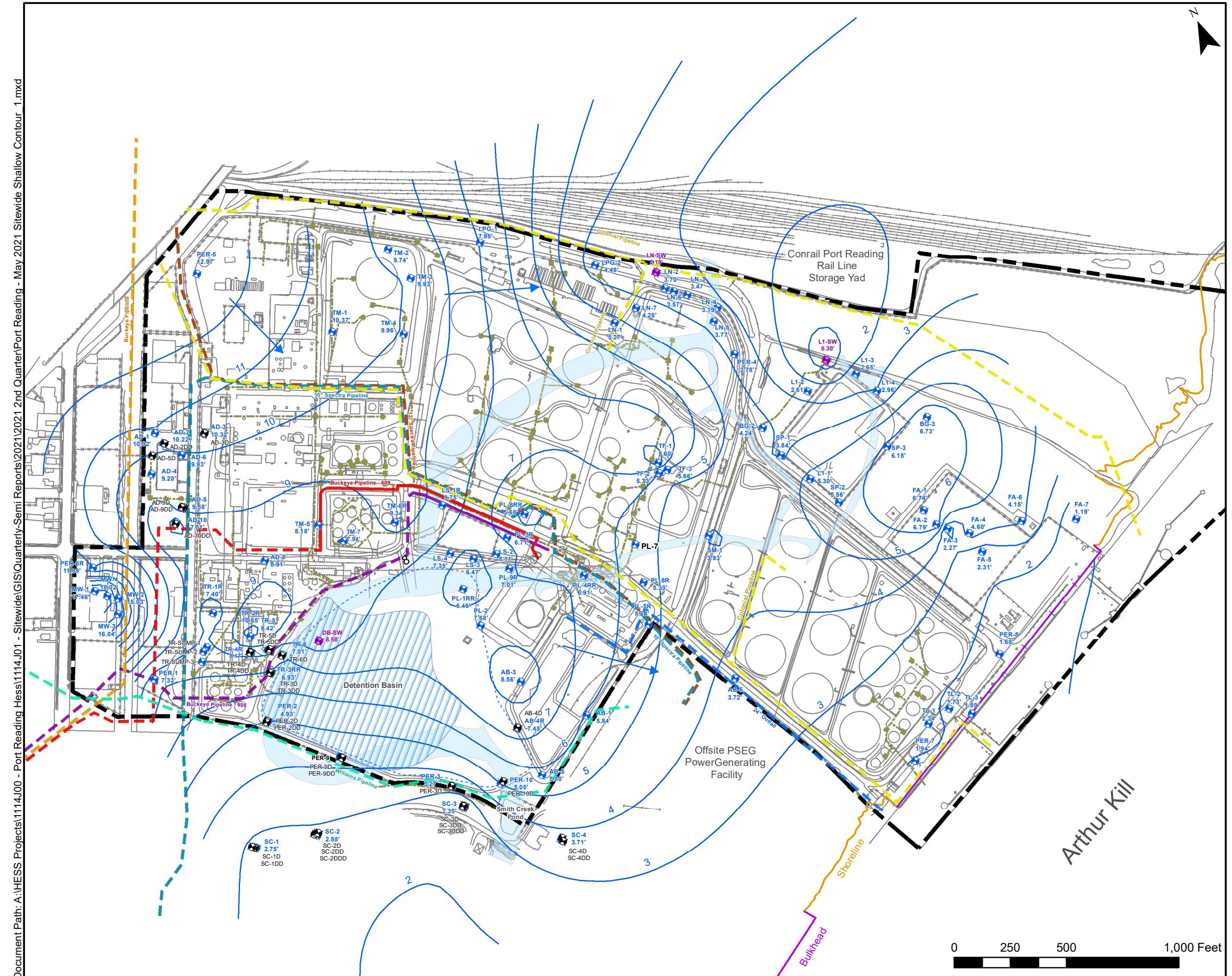
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Source: NAD 1983 (2011) New Jersey State Plane FIPS 2900 US FT.



## LEGEND

- Surface Water Gauge
  - Monitoring Well
  - Shallow Monitoring Well
  - Groundwater Flow Direction
  - Groundwater Elevation Contour
  - AOC 12 Extent
  - Detention Basin Present Extents
  - Underground Utility/Wastewater System
  - Former Smith Creek Channel
  - Shoreline
  - Bulkhead
  - Site Boundary

### Pipelines

  - 10" Spectra Natural Gas Pipeline
  - 12" Spectra Pipeline
  - 24" Outfall
  - Buckeye Pipeline
  - Buckeye Petroleum Pipeline - 608
  - Buckeye Petroleum Pipeline - 609
  - Colonial Pipeline
  - Unknown Pipeline/ Utility
  - Williams Pipeline

Pipelines:  
- Solid Line: Aboveground  
Dotted Line: Underground

# **FIGURE: 9.1**

## **May 2021**

### **Contour Map**

### **Shallow Wells**

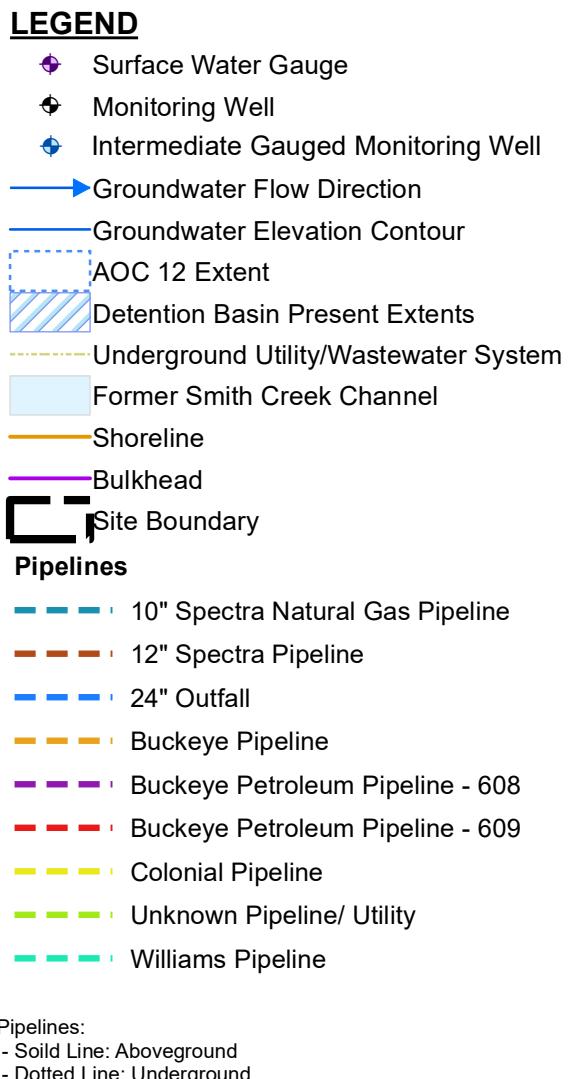
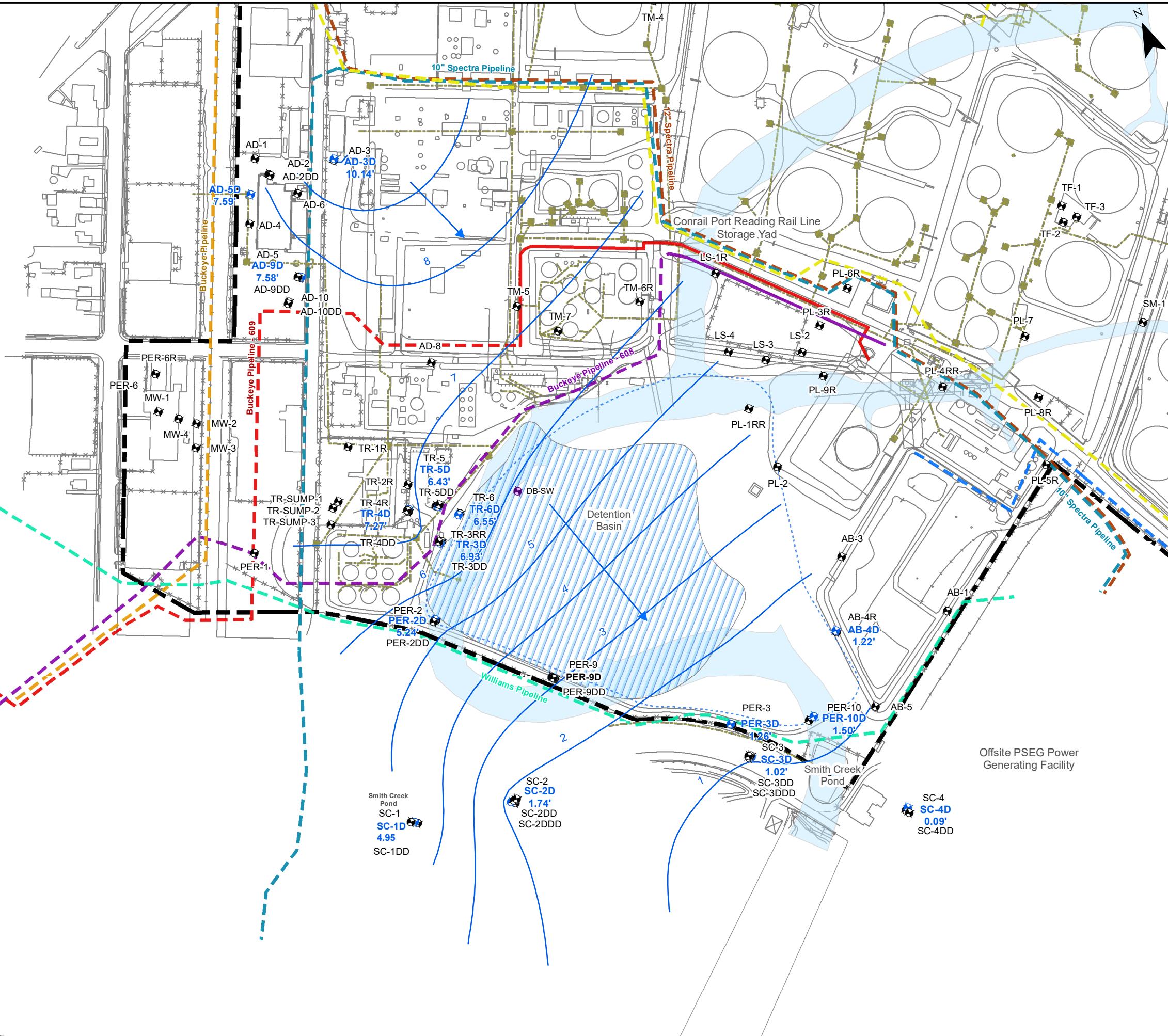
**HESS CORPORATION  
FORMER PORT READING COMPLEX  
750 CLIFF ROAD  
PORT READING, NEW JERSEY**

<b>Project #:</b>	1114J01	<b>Drawn:</b>	6/07/2021
<b>SRP PI#:</b>	006148	<b>Drawn By:</b>	AE



*Environmental Engineering*  
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**FIGURE: 9.2**  
**May 2021**  
**Contour Map**  
**Intermediate Wells**

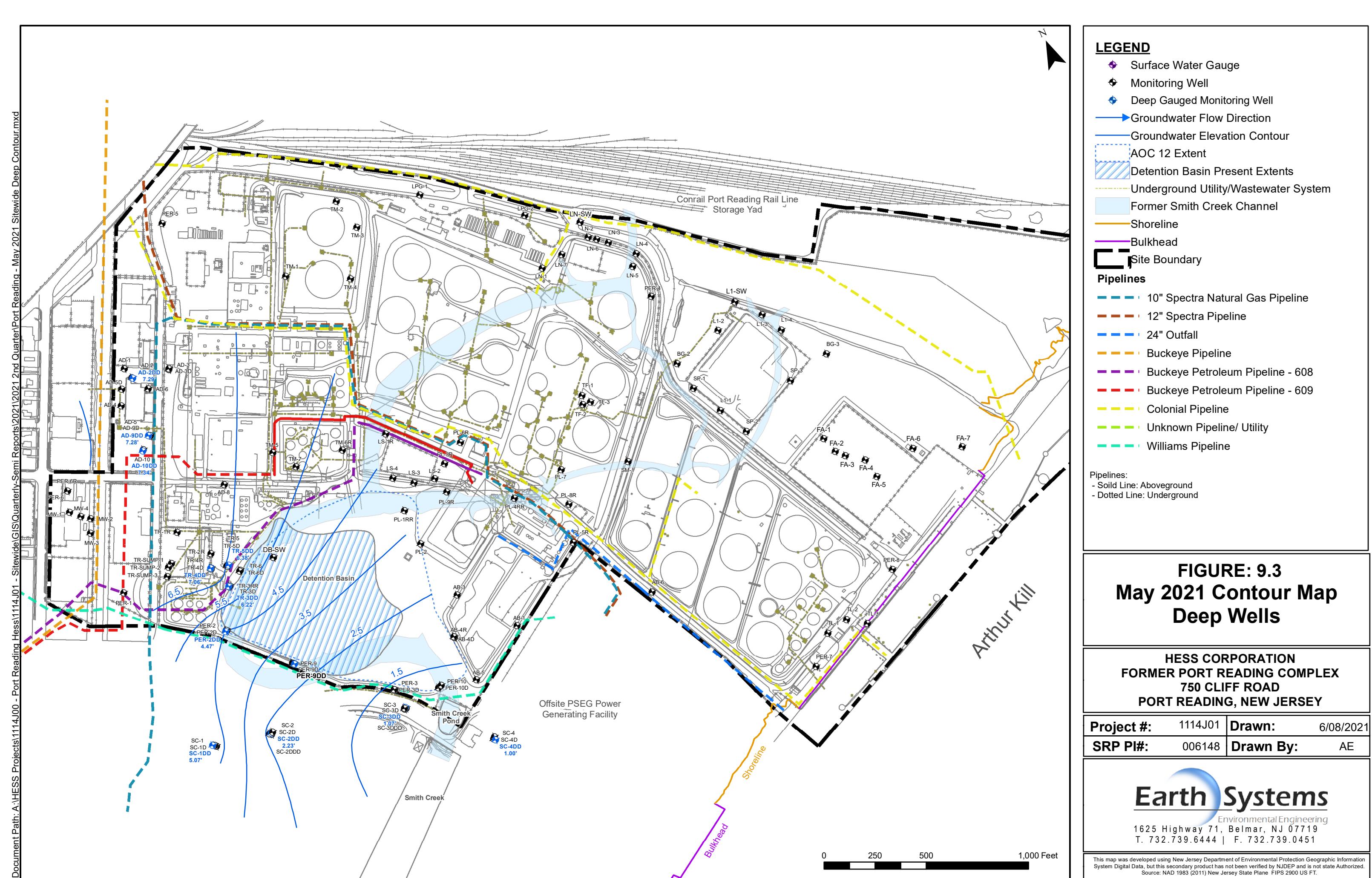
**HESS CORPORATION**  
**FORMER PORT READING COMPLEX**  
**750 CLIFF ROAD**  
**PORT READING, NEW JERSEY**

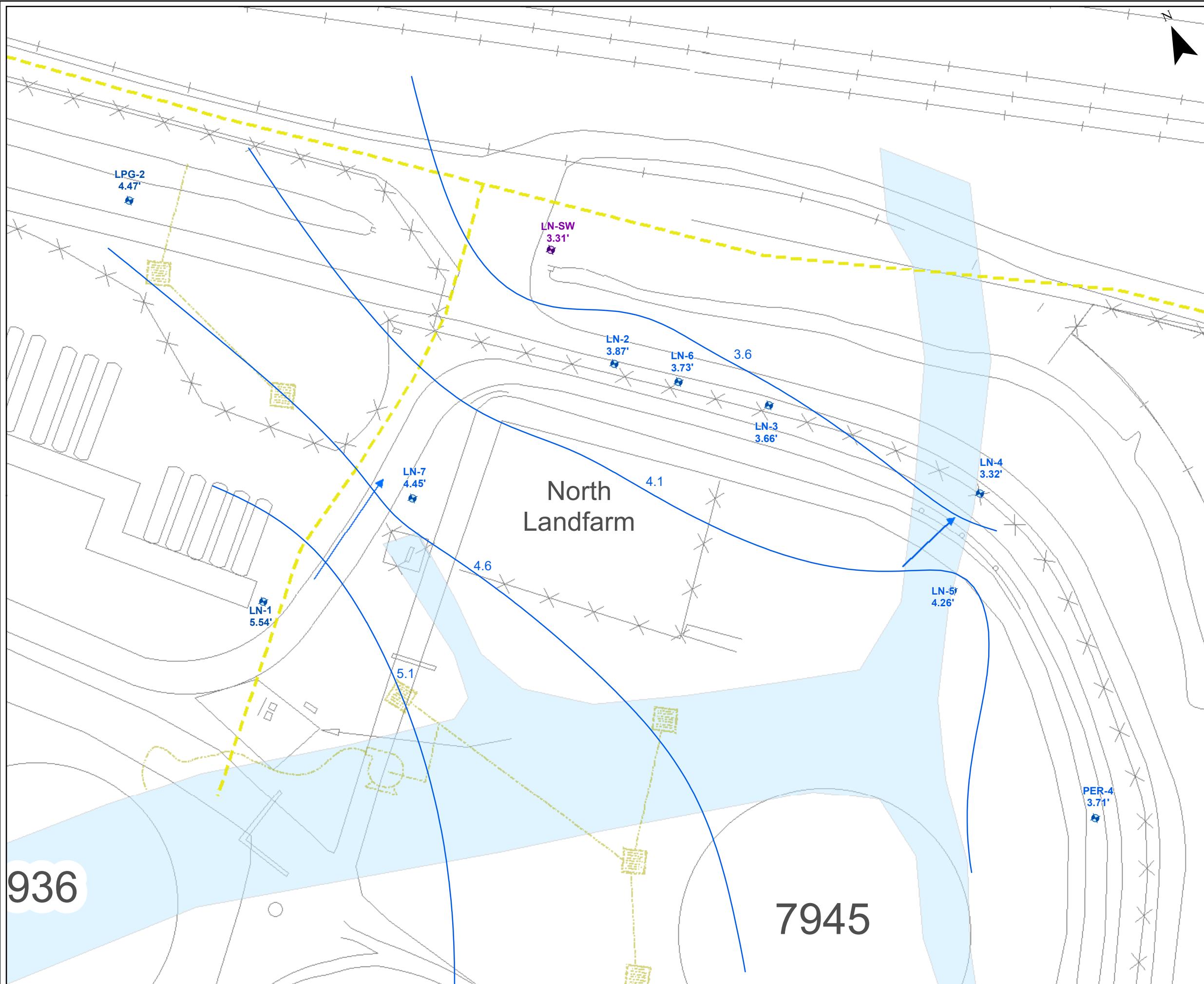
Project #:	1114J01	Drawn:	6/08/2021
SRP PI#:	006148	Drawn By:	AE



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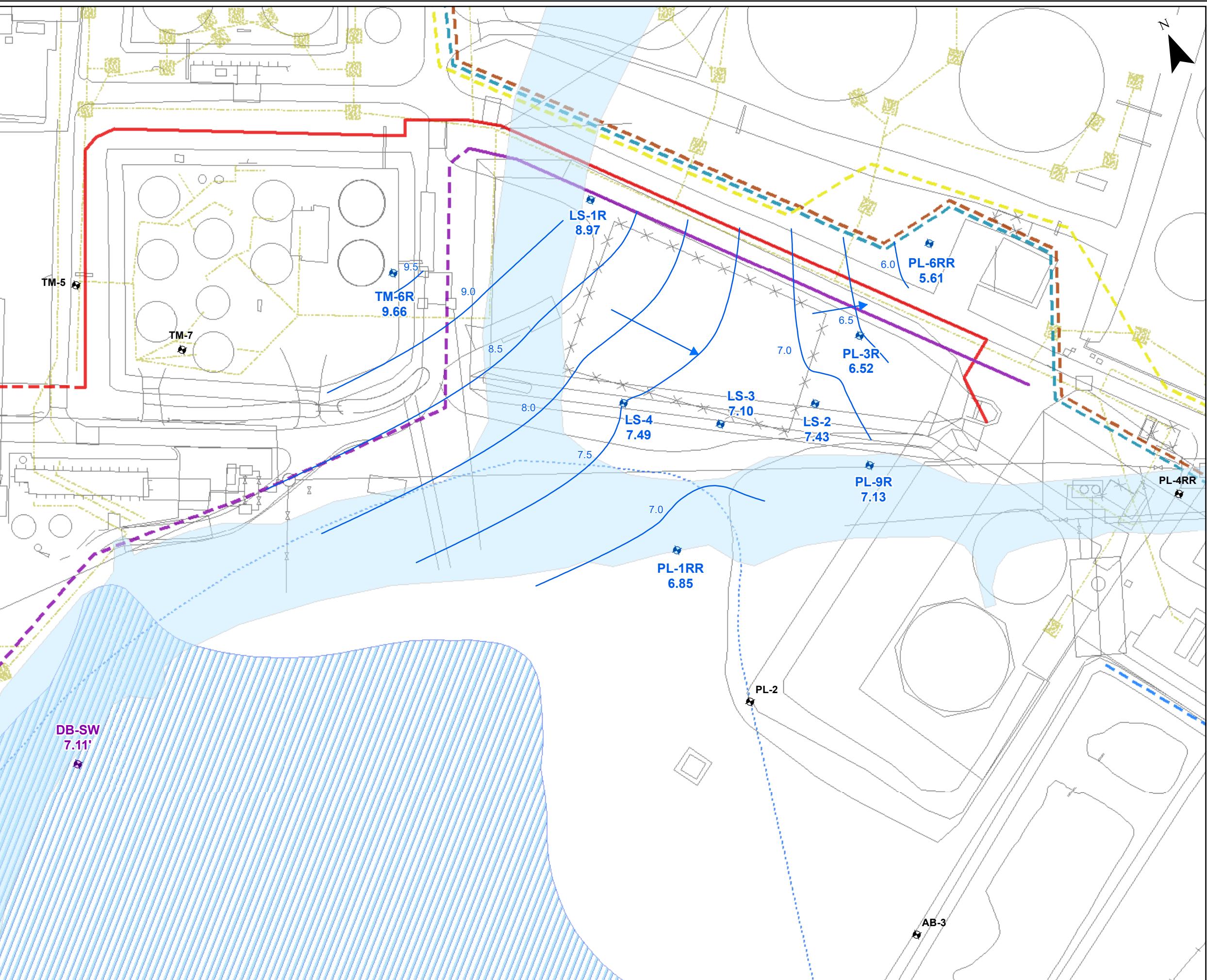
This map was developed using New Jersey Department of Environmental Protection Geographic Information System Digital Data, but this secondary product has not been verified by NJDEP and is not state Authorized.  
Source: NAD 1983 (2011) New Jersey State Plane FIPS 2900 US FT.

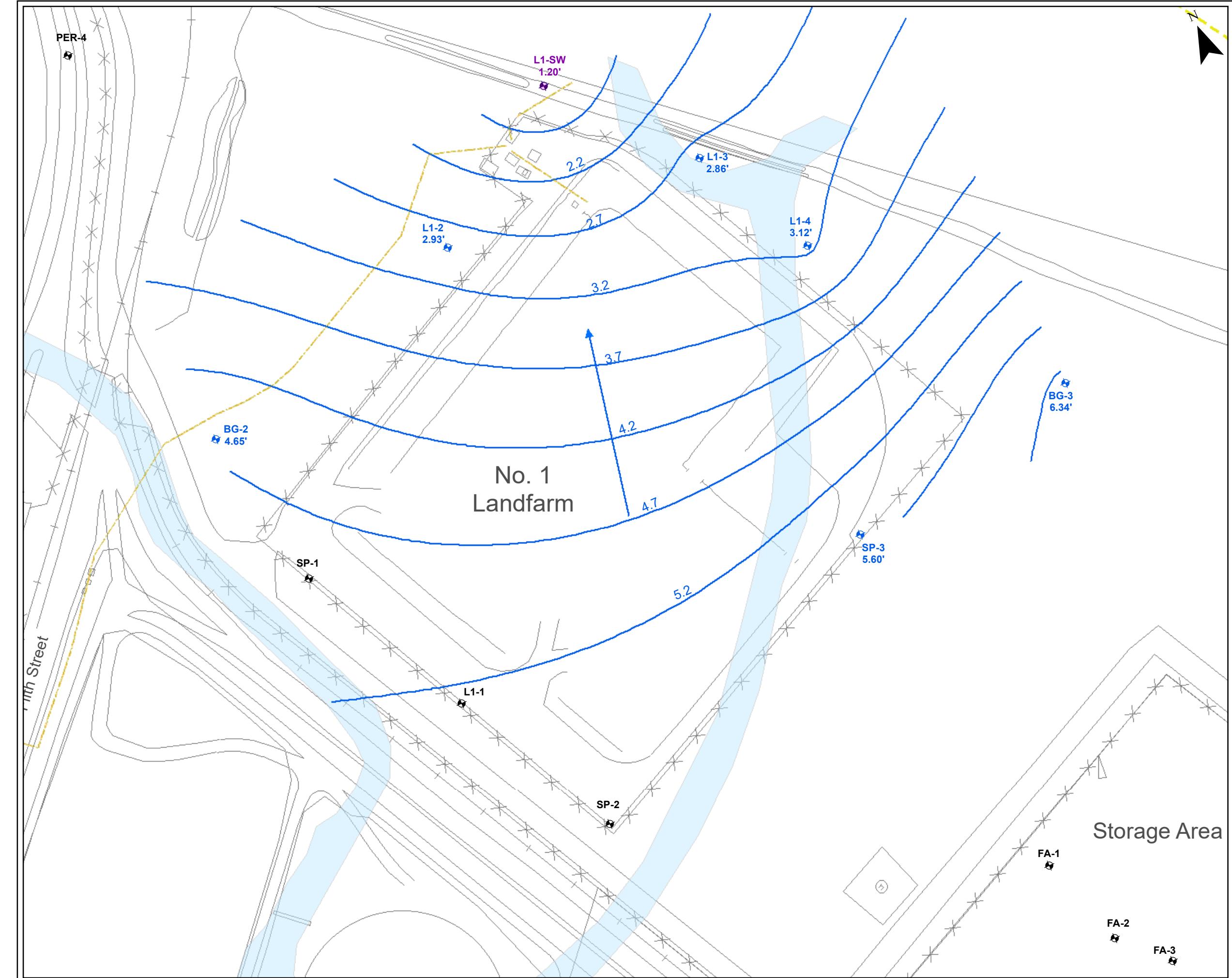




**Earth Systems**

Environmental Engineering  
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**FIGURE: 12**  
**APRIL 2021**  
**NUMBER 1 LANDFARM**  
**GROUNDWATER ELEVATION CONTOUR**

**HESS CORPORATION**  
**FORMER PORT READING COMPLEX**  
**750 CLIFF ROAD**  
**PORT READING, NEW JERSEY**

Project #:	1114J01	Drawn:	04/12/2021
SRP PI#:	006148	Drawn By:	AE

**Earth Systems**  
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Source: NAD 1983 (2011) New Jersey State Plane FIPS 2900 US FT.

# **Tables**

Table 1  
Monthly Groundwater Gauging Table  
Hess Corporation - Former Port Reading Complex  
750 Cliff Road  
Port Reading, Middlesex County, New Jersey

Groundwater Gauging Data									
Well I.D.	Date	Depth to LNAPL (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	DTB from TOC (ft)	TOC Elevation (ft amsl)	Groundwater Elevation (ft amsl)	PID	Notes
PL-1RR	4/9/2021	-	0.51	-	15.20	7.36	6.85	0.2	Discontinuous Sheen, Sock fully absorbed, Replaced sock
	4/23/2021	-	1.04	-	14.90	7.36	6.32	9.8	Discontinuous Sheen, Replaced Sock
	5/6/2021	-	0.21	-	14.90	7.35	7.15	0.1	Discontinuous Sheen, Sock fully absorbed, Replaced sock
	5/26/2021	-	0.90	-	15.00	7.36	6.46	1.8	Discontinuous Sheen
	6/9/2021	-	1.20	-	15.00	7.36	6.16	1.1	
	6/24/2021	-	0.95	-	15.00	7.36	6.41	11.4	Discontinuous Sheen, Replaced Sock
PL-2	4/9/2021	-	1.75	-	17.40	9.58	7.83	0.0	
	4/23/2021	-	1.65	-	16.88	9.58	7.93	0.0	Iron Sheen
	5/6/2021	-	1.71	-	16.86	9.58	7.87	0.0	Iron Sheen on water surface, sock not needed to be replaced
	5/26/2021	-	1.90	-	17.40	9.58	7.68	6.9	
	6/9/2021	-	1.52	-	17.40	9.58	8.06	7.8	
	6/24/2021	-	1.85	-	17.40	9.58	7.73	8.1	
PL-3R	4/9/2021	-	3.64	-	19.15	10.16	6.52	3.6	
	4/23/2021	-	3.44	-	19.09	10.16	6.72	0.0	
	5/6/2021	-	3.25	-	19.05	10.16	6.91	0.0	
	5/26/2021	-	3.45	-	19.10	10.16	6.71	0.0	
	6/9/2021	-	2.73	-	19.08	10.16	7.43	0.0	
	6/24/2021	-	3.59	-	19.09	10.16	6.57	1.8	Top of PVC bent, DTW likely inaccurate.
PL-4RR	4/9/2021	-	4.43	-	13.43	11.56	7.13	0.0	
	4/23/2021	-	4.49	-	13.50	11.56	7.07	0.0	
	5/6/2021	-	3.51	-	13.31	11.56	8.05	0.0	
	5/26/2021	-	4.65	-	13.00	11.56	6.91	0.0	
	6/9/2021	-	3.56	-	13.00	11.56	8.00	0.0	
	6/24/2021	-	3.76	-	13.00	11.56	7.80	0.0	
PL-5R	4/9/2021	-	1.10	-	9.80	6.54	5.44	97.2	LNAPL, Sock 1/4 absorbed, replaced sock
	4/23/2021	-	1.20	-	9.80	6.54	5.34	35.6	Sheen, Replaced Sock
	5/6/2021	-	0.20	-	9.80	6.54	6.34	8.7	LNAPL, Sock 1/4 absorbed, replaced sock
	5/26/2021	-	1.30	-	9.80	6.54	5.24	40.0	Sheen, No measurable LNAPL, replaced sock
	6/9/2021	-	0.5	-	9.80	6.54	6.04	60.8	Sheen, No measurable LNAPL, replaced sock
	6/24/2021	-	1.41	-	9.80	6.54	5.13	54.5	Discontinuous sheen, product-like substance, replaced sock
PL-6RR	4/9/2021	-	1.27	-	15.10	6.88	5.61	0.0	
	4/23/2021	-	1.16	-	15.10	6.88	5.72	1.0	
	5/6/2021	-	1.00	-	15.10	6.88	5.88	0.0	
	5/26/2021	-	1.20	-	15.20	6.88	5.68	0.4	
	6/9/2021	-	0.1	-	15.10	6.88	6.78	1.1	
	6/24/2021	-	1.15	-	15.10	6.88	5.73	0.0	
PL-7	4/9/2021	-	NM	-	5.01	10.75	NM	0.0	Damaged Well
	4/23/2021	-	NM	-	5.01	10.75	NM	0.0	Damaged Well
	5/6/2021	-	NM	-	5.01	10.75	NM	0.0	Damaged Well
	5/26/2021	-	NM	-	5.01	10.75	NM	0.0	Damaged Well
	6/9/2021	-	NM	-			NM		Damaged Well
	6/24/2021	-	NM	-			NM		Damaged Well
PL-8R	4/9/2021	-	4.39	-	22.40	9.91	5.52	0.0	
	4/23/2021	-	4.22	-	22.21	9.91	5.69	0.0	
	5/6/2021	-	3.79	-	21.82	9.91	6.12	0.0	
	5/26/2021	-	4.58	-	21.75	9.91	5.33	0.3	
	6/9/2021	-	3.21	-	21.92	9.91	6.70	0.0	
	6/24/2021	-	4.32	-	21.92	9.91	5.59	0.0	
PL-9R	4/9/2021	-	1.98	-	20.47	9.11	7.13	2.1	
	4/23/2021	-	1.80	-	20.45	9.11	7.31	0.0	
	5/6/2021	-	1.77	-	20.45	9.11	7.34	0.0	Iron Sheen on water surface
	5/26/2021	-	2.10	-	22.48	9.11	7.01	0.0	Iron Sheen on water surface
	6/9/2021	-	1.48	-	20.45	9.11	7.63	0.0	
	6/24/2021	-	2.24	-	20.45	9.11	6.87	0.0	
TF-1	4/9/2021	-	2.56	-	12.10	8.60	6.04	38.6	Discontinuous Sheen, Replaced Sock
	4/23/2021	-	2.99	-	12.10	8.60	5.61	41.8	
	5/6/2021	-	NM	-	12.10	8.60	NM	NM	Buckeye Construction
	5/26/2021	-	NM	-	12.10	8.60	NM	NM	Inaccessible
	6/9/2021	-	NM	-	12.10	8.60	NM	NM	Inaccessible
	6/24/2021	-	2.75	-	12.10	8.60	5.85	96.4	
TF-2	4/9/2021	-	1.79	0.01	11.60	7.50	7.95	8.1	Discontinuous Sheen, Replaced Sock
	4/23/2021	-	2.19	0.01	11.60	7.50	8.35	55.2	Discontinuous Sheen, Replaced Sock
	5/6/2021	-	NM	-	NM	7.50	NM	NM	Buckeye Construction
	5/26/2021	-	1.96	-	11.60	7.50	8.11	37.7	Discontinuous Sheen, Sock 3/4 absorbed
	6/9/2021	-	1.5	-	11.60	7.50	7.65	18.9	Discontinuous Sheen, Sock 3/4 absorbed
	6/24/2021	-	2.05	-	11.60	7.50	8.20	15.0	Discontinuous sheen, Replaced sock
TF-3	4/9/2021	-	2.86	-	11.97	8.58	5.72	2.7	
	4/23/2021	-	2.98	-	11.95	8.58	5.60	3.1	
	5/6/2021	-	NM	-	NM	8.58	NM	NM	Buckeye Construction
	5/26/2021	-	2.92	-	11.95	8.58	5.66	4.3	
	6/9/2021	-	1.63	-	11.95	8.58	6.95	1.8	
	6/24/2021	-	2.40	-	11.95	8.58	6.18	14.4	
TM-6R	4/9/2021	-	4.60	-	20.61	14.26	9.66	67.6	Sock 1/4 absorbed, light orange and black
	4/23/2021	-	4.46	-	20.70	14.26	9.80	46.7	
	5/6/2021	-	4.57	-	20.80	14.26	9.69	20.2	Sock 1/4 absorbed, light orange and black
	5/26/2021	-	4.92	-	20.70	14.26	9.34	0.0	
	6/9/2021	-	4	-	20.70	14.26	10.26	10.2	Sock 1/4 absorbed, light orange and black
	6/24/2021	-	4.65	-	20.70	14.26	9.61	24.7	
TM-7	4/9/2021	-	6.73	-	21.98	14.81	8.08	18.1	Replaced Sock, Slight sheen
	4/23/2020	-	6.59	-	21.98	14.81	8.22	37.8	Sock 1/4 absorbed
	5/6/2021	-	6.54	-	21.98	14.81	8.27	19.9	Sock 1/4 absorbed
	5/26/2021	-	6.87	-	21.98	14.81	7.94	0.0	Sock 1/4 absorbed
	6/9/2021	-	6.49	-	21.98	14.81	8.32		Sock 1/4 absorbed
	6/24/2021	-	6.51	-	21.98	14.81	8.3	67.1	

Table 1  
 Monthly Groundwater Gauging Table  
 Hess Corporation - Former Port Reading Complex  
 750 Cliff Road  
 Port Reading, Middlesex County, New Jersey

Well I.D.	Date	Depth to LNAPL (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	DTB from TOC (ft)	TOC Elevation (ft amsl)	Groundwater Elevation (ft amsl)	PID	Notes
TR-1R	4/9/2021	-	6.07	-	15.10	13.68	7.61	0.0	
	4/23/2021		6.04		15.00	13.68	7.64	0.0	
	5/6/2021	-	6.10	-	15.00	13.68	7.58	0.0	
	5/26/2021		6.28		14.98	13.68	7.40	0.0	
	6/9/2021		5.87		15.00	13.68	7.81	0.0	
	6/24/2021		6.16		15.00	13.68	7.52	0.0	
TR-2R	4/9/2021		0.00		20.30	12.47	12.49	88.2	Discontinuous sheen on water surface, sock 1/8 absorbed
	4/23/2021		0.17		19.74	12.47	12.30	10.2	
	5/6/2021	-	NM	-	NM	12.47	NM	NM	Underwater
	5/26/2021		1.82		19.75	12.47	10.65	0.0	Slight sheen, replaced sock
	6/9/2021		NM		NM	12.47	NM	NM	Underwater
	6/24/2021		0.56		NM	12.47	11.91	NM	Water near top of casing, sheen, sock 1/2 absorbed
TR-3RR	4/9/2021	-	2.15	-	15.14	9.63	7.48	0.0	
	4/23/2021		2.30		15.00	9.63	7.33	0.0	
	5/6/2021		2.33		14.90	9.63	7.30	0.0	
	5/26/2021		2.70		14.80	9.63	6.93	0.0	
	6/9/2021		1.7		14.90	9.63	7.93	0.0	
	6/24/2021		2.22		14.90	9.63	7.41	0.0	
TR-3D	4/9/2021	-	2.61	-	24.91	9.33	6.72	291.4	
	4/23/2021		2.47		24.91	9.33	6.86	96.7	
	5/6/2021	-	2.14	-	24.90	9.33	7.19	62.3	
	5/26/2021		2.40		24.90	9.33	6.93	223.0	
	6/9/2021		0.1		24.90	9.33	9.23	281.7	
	6/24/2021		0.42		24.90	9.33	8.91	4.7	
TR-3DD	4/9/2021		3.28		60.14	9.59	6.31	1.6	
	4/23/2021		3.07		59.20	9.59	6.52	0.4	
	5/6/2021	-	3.09	-	60.00	9.59	6.50	0.0	
	5/26/2021		3.37		60.00	9.59	6.22	0.0	
	6/9/2021		1.92		60.00	9.59	7.67	2.4	
	6/24/2021		2.10		60.00	9.59	7.49	0.0	
TR-4R	4/9/2021	-	5.40	-	13.50	12.48	7.08	210.8	
	4/23/2021		3.06		13.44	12.48	9.42	113.9	
	5/6/2021	-	NM	-	NM	12.48	NM	NM	Underwater
	5/26/2021		4.01		13.61	12.48	7.27		
	6/9/2021		NM		NM	12.48	NM	NM	Underwater
	6/24/2021		4.09		13.60	12.48	8.39	126.3	
TR-4D	4/9/2021		2.58		24.00	12.18	9.60	NA	
	4/23/2021		5.02		24.53	12.18	7.16	3.3	
	5/6/2021	-	NM	-	24.00	12.18	NM	11.5	Underwater
	5/26/2021		5.21		24.56	12.18	7.27	0.0	
	6/9/2021		NM		24.00	12.18	NM	11.5	Underwater
	6/24/2021		5.24		24.00	12.18	NM	13.0	
TR-4DD	4/9/2021	-	NM	-	56.70	12.58	NM	NA	Underwater
	4/23/2021		5.33		56.70	12.58	7.25	3.1	
	5/6/2021	-	NM	-	56.70	12.58	NM	0.0	Underwater
	5/26/2021		5.52		56.70	12.58	7.06	0.0	
	6/9/2021		NM	-	56.70	12.58	NM	0.0	Underwater
	6/24/2021		5.47		56.70	12.58	7.11	0.0	
TR-5	4/9/2021	-	3.41	-	10.64	11.99	8.58	1.3	
	4/23/2021		3.51		10.65	11.99	8.48	100.1	
	5/6/2021	-	3.32	-	10.68	11.99	8.67	37.0	
	5/26/2021		3.57		10.68	11.99	8.42	0.0	
	6/9/2021		3.01		10.68	11.99	8.98	1.9	
	6/24/2021		3.43		10.68	11.99	8.56	145.0	
TR-5D	4/9/2021		4.91		23.30	12.01	7.10	51.4	
	4/23/2021		4.85		23.31	12.01	7.16	57.1	
	5/6/2021	-	4.90	-	23.25	12.01	7.11	3.2	
	5/26/2021		5.14		23.25	12.01	6.87	0.0	
	6/9/2021		4.7		23.25	12.01	7.31	0.0	
	6/24/2021		4.96		23.25	12.01	7.05	0.0	
TR-5DD	4/9/2021	-	4.75	-	59.31	11.64	6.89	0.0	
	4/23/2021		4.71		59.30	11.64	6.93	0.7	
	5/6/2021		4.63		59.30	11.64	7.01	0.0	
	5/26/2021		4.90		59.30	11.64	6.74	0.0	
	6/9/2021		4.6		59.30	11.64	7.04	0.0	
	6/24/2021		4.7		59.30	11.64	6.94	0.0	
TR-6	4/9/2021		3.52		12.60	10.78	7.26	0.0	
	4/23/2021		3.56		12.60	10.78	7.22	0.0	
	5/6/2021	-	3.29	-	12.60	10.78	7.49	0.0	
	5/26/2021		3.77		12.60	10.78	7.01	0.0	
	6/9/2021		3.00		12.60	10.78	7.78	0.0	
	6/24/2021		3.69		12.60	10.78	7.09	0.0	
TR-6D	4/9/2021		4.02		28.00	10.81	6.79	0.0	
	4/23/2021		4.02		28.10	10.81	6.79	0.0	
	5/6/2021		3.98		28.20	10.81	6.83	0.0	
	5/26/2021		4.26		28.20	10.81	6.55	0.0	
	6/9/2021		3.81		28.20	10.81	7.00	0.0	
	6/24/2021		4.09		28.20	10.81	6.72	0.0	
TR-Sump-1	4/9/2021	-	5.76	-	7.30	12.62	6.86	0.0	
	4/23/2021		5.36		7.30	12.62	7.26	0.1	
	5/6/2021	-	5.23	-	7.30	12.62	7.39	0.0	
	5/26/2021		5.86		7.30	12.62	6.76	0.0	
	6/9/2021		5.29		7.30	12.62	7.33	0.0	
	6/24/2021		5.19		7.30	12.62	7.43	0.0	
TR-Sump-2	4/9/2021		4.84		7.20	12.35	7.51	0.0	
	4/23/2021		4.86		7.20	12.35	7.49	0.0	
	5/6/2021	-	4.93	-	7.20	12.35	7.42	0.0	
	5/26/2021		5.25		7.20	12.35	7.10	0.0	
	6/9/2021		4.80		7.20	12.35	7.55	0.0	
	6/24/2021		4.9		7.20	12.35	7.45	0.0	

Table 1  
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 Hess Corporation - Former Port Reading Complex  
 750 Cliff Road  
 Port Reading, Middlesex County, New Jersey

Well I.D.	Date	Depth to LNAPL (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	DTB from TOC (ft)	TOC Elevation (ft amsl)	Groundwater Elevation (ft amsl)	PID	Notes
Interceptor Trench	4/9/2021	2.5		-	5.00	-	-	-	
	4/23/2021	1.8			5.00				
	5/6/2021	1.00		-	5.00	-	-	-	
	5/26/2021	0.50			5.00				
	6/9/2021	1.00			5.00				
	6/24/2021	0.75	0.755		5.00				Discontinuous Sheen. No measurable product.
DB-SW	4/9/2021		7.00			1.08	5.92		
	4/23/2021		7.37			1.08	6.29		
	5/6/2021	-	7.00	-	-	1.08	5.92	-	
	5/26/2021		7.50			1.08	6.42		
	6/9/2021		7.00			1.08	5.92		
	6/24/2021		7			1.08	5.92		
LN-SW	4/9/2021	-	3.00	-	-	-0.31	3.31	-	
	4/23/2021		1.00			-0.31	1.31		
	5/6/2021		1.00			-0.31	1.31		
	5/26/2021		0.50			-0.31	0.81		
	6/9/2021		2.00			-0.31	2.31		
	6/24/2021		1.5			-0.31	1.81		
L1-SW	4/9/2021		1.00			-0.20	1.20		
	4/23/2021		0.50			-0.20	0.70		
	5/6/2021	-	1.00	-	-	-0.20	1.20	-	
	5/26/2021		0.50			-0.20	0.70		
	6/9/2021		0.40			-0.20	0.60		
	6/24/2021		NM			-0.2	NM		Could not read gauge, cannot see through heavy brush.
SC-SG-1	4/23/2021		NA						Stream Gauge under water and not visible
	4/9/2021		0.00			-0.98	NA		Stream Gauge under water and not visible
	5/6/2021		0.00			-0.98	NA		Stream Gauge under water and not visible
	5/26/2021		3.50			-0.98	NA		Stream Gauge under water and not visible
	6/9/2021								Stream Gauge under water and not visible
	6/24/2021								Stream Gauge under water and not visible
SC-SG-1A	4/9/2021	-	0.00	-	-	-1.10	-1.10	-	Tide too low for reading
	4/23/2021		0.00						Tide too low for reading
	5/6/2021		0.00			-1.10	-1.10		Tide too low for reading
	5/26/2021		0.00			-1.10	-1.10		Tide too low for reading
	6/9/2021		0.00						Tide too low for reading
	6/24/2021								Tide too low for reading
SC-SG-2	4/9/2021		0.00			-1.64	-1.64		Tide too low for reading
	4/23/2021		0.00						Tide too low for reading
	5/6/2021	-	0.00	-	-	-1.64	-1.64	-	Tide too low for reading
	5/26/2021		1.00			-1.64	-0.64	-	Tide too low for reading
	6/9/2021		0.00						Tide too low for reading
	6/24/2021								Tide too low for reading
FA-1	4/9/2021	-	2.64	-	12.25	9.67	7.03	0.0	
	4/23/2021		2.61		12.05	9.67	7.06	0.0	
	5/6/2021		2.71		12.00	9.67	6.96	0.0	
	5/26/2021		3.28		12.10	9.67	6.39	0.0	
	6/9/2021		2.23		12.30	9.67	7.44	0.0	
	6/24/2021		2.86		12.30	9.67	6.81	0.0	
FA-2	4/9/2021		3.10		13.60	10.39	7.29	0.0	
	4/23/2021		3.39		13.40	10.39	7.00	0.0	
	5/6/2021	-	3.50	-	13.40	10.39	6.89	0.0	
	5/26/2021		3.97		13.41	10.39	6.42	0.0	
	6/9/2021		3.16		13.60	10.39	7.23	0.0	
	6/24/2021		3.66		13.60	10.39	6.73	0.0	
FA-3	4/9/2021		7.89		14.60	10.84	2.95	0.0	
	4/23/2021		8.04		14.50	10.84	2.80	7.6	Discontinuous Sheen, unmeasurable
	5/6/2021		8.24		14.50	10.84	2.60	0.0	Placed sock
	5/26/2021		9.01		14.50	10.84	1.83	0.2	Sheen, replaced sock
	6/9/2021		8.31		14.50	10.84	2.53	2.2	Sheen, Sock Saturated, Product Bailer Placed
	6/24/2021		8.65		14.50	10.84	2.19	33.2	Removed bailer, replaced with sock. Discontinuous sheen.
FA-4	4/9/2021	-	6.25	-	14.50	10.98	4.73	0.0	
	4/23/2021		8.47		14.50	10.98	2.51		
	5/6/2021		8.80		14.40	10.98	2.18	0.0	
	5/26/2021		6.79		14.97	10.98	4.19	0.0	
	6/9/2021		8.51		14.60	10.98	2.47	0.0	
	6/24/2021		8.67		14.60	10.98	2.31	0.0	
FA-5	4/9/2021	7.86	7.88	0.02	14.50	10.22	2.34	0.0	Discontinuous Sheen, Placed product bailer
	4/23/2021		7.86		14.50	10.22	2.36	15.6	Discontinuous Sheen, took sample, replaced bailer
	5/6/2021	-	7.89	-	14.50	10.22	2.33	0.0	Discontinuous Sheen, Placed sock
	5/26/2021		8.20	8.22	0.02	14.50	10.22	2.00	Sock fully saturated, Replaced sock
	6/9/2021		6.87		14.50	10.22	3.35	17.8	Sock fully saturated, Product Bailer Placed
	6/24/2021		7.45	7.46	0.01	14.50	10.22	2.76	Placed sock
FA-6	4/9/2021	-	8.12	-	18.20	12.13	4.01	0.0	
	4/23/2021		8.16		18.20	12.13	3.97	0.0	
	5/6/2021		8.22		18.10	12.13	3.91	0.0	Orange silt throughout water column
	5/26/2021		8.31		18.10	12.13	3.82	0.0	
	6/24/2021		6.54		18.10	12.13	5.59	0.0	Could not access
FA-7	4/9/2021	-	9.28	-	18.15	10.14	0.86	0.0	
	4/23/2021		9.19		18.00	10.14	0.95	0.0	
	5/6/2021		9.13		18.00	10.14	1.01	0.0	
	5/26/2021		9.75		18.15	10.14	0.39	0.0	
	6/24/2021		8.77		18.15	10.14	1.37	0.0	Could not access

Table 2  
 Hess Corporation Former Port Reading Complex  
 750 Cliff Road, Port Reading NJ  
 Semi-Annual Sitewide Monitoring Well Gauging Data

WELL I.D.	Date	Depth to LNAPL (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	DTB Original (ft)	DTB from TOC (ft)	TOC Elevation (ft)	Water Elevation (ft)	LNAPL Corrected Water Level ( $\rho = 0.82$ )	PID	Notes
AB-1	5/26/2021	--	5.84	--	13.00	12.60	11.68	5.84	--	0.0	
AB-3	5/26/2021	--	3.76	--	13.00	13.30	12.33	8.57	--	6.9	
AB-4R	5/26/2021	--	4.60	--	15.50	16.00	12.05	7.45	--	0.0	
AB-4D	5/26/2021	--	10.59	--	33.00	34.00	11.81	1.22	--	0.0	
AB-5	5/26/2021	--	5.38	--	13.00	13.50	11.18	5.80	--	0.0	
AB-6	5/26/2021	--	3.23	--	10.50	10.40	6.95	3.72	--	0.0	
AD-1	5/26/2021	--	5.20	--	13.00	11.91	16.12	10.92	--	0.0	
AD-2	5/26/2021	--	6.42	--	18.00	16.85	16.64	10.22	--	192.8	
AD-2DD	5/26/2021	--	9.29	--	45.00	44.98	16.58	7.29	--	0.2	
AD-3	5/26/2021	--	9.64	--	14.00	13.85	19.96	10.32	--	0.0	
AD-3D	5/26/2021	--	9.57	--	29.00	29.00	19.71	10.14	--	0.0	
AD-4	5/26/2021	--	6.25	--	15.00	14.84	15.45	9.20	--	0.0	
AD-5	5/26/2021	--	6.01	--	15.00	14.53	15.59	9.58	--	0.0	
AD-5D	5/26/2021	--	7.92	--	30.00	29.82	15.48	7.56	--	139.1	
AD-6	5/26/2021	--	7.20	--	15.00	14.41	17.13	9.93	--	0.0	
AD-8	5/26/2021	--	6.94	--	15.00	15.50	15.85	8.91	--	0.0	
AD-9D	5/26/2021	--	7.92	--	28.00	26.81	15.50	7.58	--	0.0	
AD-9DD	5/26/2021	--	8.15	--	60.00	58.50	15.43	7.28	--	0.0	
AD-10	5/26/2021	--	8.54	--	20.00	19.42	16.05	7.51	--	12.1	
AD-10DD	5/26/2021	--	8.80	--	64.00	64.70	16.14	7.34	--	0.0	
BG-3	5/26/2021	--	3.58	--	11.00	10.91	10.31	6.73	--	0.0	
FA-1	5/26/2021	--	3.28	--	13.00	12.10	10.02	6.74	--	0.0	
FA-2	5/26/2021	--	3.97	--	14.00	13.41	10.76	6.79	--	0.0	
FA-3	5/26/2021	--	9.01	--	15.00	14.50	11.28	2.27	--	0.2	sheen, replaced sock
FA-4	5/26/2021	--	6.79	--	15.00	14.97	11.39	4.60	--	0.0	
FA-5	5/26/2021	8.20	8.22	0.20	15.00	14.94	10.53	2.31	--	39.4	replaced sock
FA-6	5/26/2021	--	8.31	--	15.00	18.30	12.46	4.15	--	0.0	
FA-7	5/26/2021	--	9.75	--	18.00	18.10	10.94	1.19	--	0.0	
LPG-1	5/26/2021	--	3.62	--	9.00	7.99	11.60	7.98	--	0.0	
LPG-2	5/26/2021	--	3.58	--	10.00	9.62	7.05	3.47	--	0.0	
PER-1	5/26/2021	--	9.85	--	18.00	17.75	17.18	7.33	--	0.0	
PER-2	5/26/2021	--	5.83	--	12.00	12.40	10.76	4.93	--	20.0	
PER-2D	5/26/2021	--	6.06	--	33.00	33.10	11.30	5.24	--	0.0	
PER-2DD	5/26/2021	--	6.06	--	63.00	63.75	10.53	4.47	--	0.0	
PER-3	5/26/2021	--	4.05	--	12.16	12.17	7.32	3.27	--	0.0	
PER-3D	5/26/2021	--	6.10	--	33.00	33.00	7.30	1.20	--	0.0	
PER-4	5/26/2021	--	6.52	--	15.00	15.50	10.30	3.78	--	0.0	Damaged, needs new lock
PER-5	5/26/2021	--	5.52	--	15.00	14.12	18.49	12.97	--	0.0	
PER-6R	5/26/2021	--	9.65	--	22.00	21.65	21.54	11.89	--	0.0	
PER-7	5/26/2021	--	7.00	--	18.00	15.65	8.94	1.94	--	0.0	
PER-8	5/26/2021	--	6.06	--	15.00	14.32	7.74	1.68	--	0.0	
PER-9	5/26/2021	--	NM	--	17.50	--	8.02	NA	--	NM	Underwater
PER-9D	5/26/2021	--	NM	--	37.50	--	7.85	NA	--	NM	Underwater
PER-9DD	5/26/2021	--	NM	--	68.50	--	7.91	NA	--	NM	Underwater
PER-10	5/26/2021	--	7.14	--	19.00	19.00	12.19	5.05	--	0.0	
PER-10D	5/26/2021	--	10.44	--	33.00	33.50	11.94	1.50	--	0.0	
PL-1RR	5/26/2021	--	0.90	--	15.00	15.00	7.36	6.46	--	1.8	
PL-2	5/26/2021	--	1.90	--	17.00	17.40	9.58	7.68	--	6.9	
PL-3R	5/26/2021	--	3.45	--	22.50	19.10	10.16	6.71	--	0.0	
PL-4RR	5/26/2021	--	4.65	--	13.00	13.00	11.56	6.91	--	0.0	
PL-5R	5/26/2021	--	1.30	--	9.80	9.80	6.54	5.24	--	40.00	Sheen, No measurable LNAPL in bailer
PL-6RR	5/26/2021	--	1.20	--	15.00	15.20	6.88	5.68	--	0.4	
PL-7	5/26/2021	--	NM	--	20.00	--	10.75	--	--	NM	Damaged
PL-8R	5/26/2021	--	4.58	--	22.50	21.75	9.91	5.33	--	0.3	
PL-9R	5/26/2021	--	2.10	--	22.50	22.48	9.11	7.01	--	0.0	
SM-1	5/26/2021	--	4.66	--	15.00	13.65	8.59	3.93	--	0.1	
SP-1	5/26/2021	--	5.11	--	13.00	11.75	8.95	3.84	--	0.0	
SP-2	5/26/2021	--	4.62	--	13.00	14.00	10.18	5.56	--	0.0	
SP-3	5/26/2021	--	3.15	--	13.00	13.10	9.33	6.18	--	0.0	
TF-1	5/26/2021	--	NM	--	12.00	--	8.60	NA	--	NM	Inaccessible
TF-2	5/26/2021	--	1.96	--	12.00	11.97	7.69	5.73	--	37.7	replaced sock, discontinuous sheen on water surface
TF-3	5/26/2021	--	2.92	--	12.00	11.76	8.58	5.66	--	4.3	
TL-1	5/26/2021	--	6.47	--	14.00	14.30	8.81	2.34	--	389.7	

Table 2  
 Hess Corporation Former Port Reading Complex  
 750 Cliff Road, Port Reading NJ  
 Semi-Annual Sitewide Monitoring Well Gauging Data

WELL I.D.	Date	Depth to LNAPL (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	DTB Original (ft)	DTB from TOC (ft)	TOC Elevation (ft)	Water Elevation (ft)	LNAPL Corrected Water Level ( $\rho = 0.82$ )	PID	Notes
TL-2	5/26/2021	--	6.75	--	15.00	12.65	8.48	1.73	--	1.8	
TL-3	5/26/2021	--	6.79	--	10.00	9.90	8.68	1.89	--	0.0	
TM-1	5/26/2021	--	9.69	--	20.50	21.50	20.06	10.37	--	0.0	
TM-2	5/26/2021	--	10.40	--	21.00	21.50	20.14	9.74	--	0.0	
TM-3	5/26/2021	--	10.26	--	20.50	20.95	20.19	9.93	--	0.0	
TM-4	5/26/2021	--	9.05	--	18.50	15.20	19.01	9.96	--	0.0	
TM-5	5/26/2021	--	7.95	--	20.50	23.00	16.13	8.18	--	0.0	
TM-6R	5/26/2021	--	4.92	--	20.00	20.70	14.26	9.34	--	0.0	
TM-7	5/26/2021	--	6.87	--	22.00	21.98	14.81	7.94	--	0.0	
TR-1R	5/26/2021	--	6.28	--	16.00	14.98	13.68	7.40	--	0.0	
TR-2R	5/26/2021	--	1.82	--	20.00	19.75	12.47	10.65	--	0.0	slight sheen, replaced sock
TR-3RR	5/26/2021	--	2.70	--	15.00	14.80	9.63	6.93	--	0.0	
TR-3D	5/26/2021	--	2.40	--	25.00	24.90	9.33	6.93	--	223.0	
TR-3DD	5/26/2021	--	3.37	--	60.00	60.00	9.59	6.22	--	0.0	
TR-4R	5/26/2021	--	4.01	--	15.00	13.61	12.18	8.17	--	0.0	
TR-4D	5/26/2021	--	5.21	--	25.00	24.56	12.48	7.27	--	0.0	
TR-4DD	5/26/2021	--	5.52	--	56.00	56.70	12.58	7.06	--	0.0	
TR-5	5/26/2021	--	3.57	--	12.00	10.68	11.99	8.42	--	0.0	
TR-5D	5/26/2021	--	5.14	--	25.00	23.20	11.57	6.43	--	0.0	
TR-5DD	5/26/2021	--	4.90	--	60.00	59.30	11.28	6.38	--	0.0	
TR-6	5/26/2021	--	3.77	--	12.50	12.60	10.78	7.01	--	0.0	
TR-6D	5/26/2021	--	4.26	--	28.30	28.20	10.81	6.55	--	0.0	
DB-SW	5/26/2021	--	7.50	--	--	--	1.08	8.58	--	0.0	
L1-SW	5/26/2021	--	0.50	--	--	--	-0.2	0.30	--	0.0	
LN-SW	5/26/2021	--	0.50	--	--	--	-0.31	0.19	--	0.0	
TR-SUMP-1	5/26/2021	--	5.86	--	--	7.30	12.62	--	--	0.0	
TR-SUMP-2	5/26/2021	--	5.25	--	--	7.20	12.35	--	--	0.1	
MW-1	5/26/2021	--	7.02	--	13.00	16.35	24.48	17.46	--	0.0	
MW-2	5/26/2021	--	3.98	--	13.00	12.70	19.01	15.03	--	0.0	
MW-3	5/26/2021	--	2.87	--	13.00	12.98	18.91	16.04	--	0.0	
MW-4	5/26/2021	--	6.05	--	15.00	18.00	24.07	18.02	--	0.0	
LN-1	5/26/2021	--	5.10	--	16.00	14.50	10.37	5.27	--	0.0	
LN-2	5/26/2021	--	5.95	--	13.00	11.40	9.65	3.70	--	0.0	
LN-3	5/26/2021	--	5.45	--	11.30	11.95	8.92	3.47	--	0.0	
LN-4	5/26/2021	--	7.50	--	14.00	14.40	10.69	3.19	--	0.0	
LN-5	5/26/2021	--	6.80	--	15.00	17.00	10.57	3.77	--	0.2	
LN-6	5/26/2021	--	8.58	--	15.00	17.10	12.15	3.57	--	0.0	
LN-7	5/26/2021	--	9.02	--	15.00	17.12	13.3	4.28	--	0.0	
LS-1R	5/26/2021	--	3.5	--	16.00	16.40	12.25	8.75	--	0.0	
LS-2	5/26/2021	--	1.64	--	12.01	12.65	9.75	8.11	--	0.0	
LS-3	5/26/2021	--	1.93	--	12.00	11.90	8.4	6.47	--	0.0	
LS-4	5/26/2021	--	1.93	--	14.00	13.80	9.28	7.35	--	0.0	
L1-1	5/26/2021	--	4.61	--	15.00	13.40	9.91	5.30	--	0.0	
L1-2	5/26/2021	--	6.44	--	14.00	14.00	9.05	2.61	--	0.0	
L1-3	5/26/2021	--	6.68	--	9.40	10.90	9.33	2.65	--	0.0	
L1-4	5/26/2021	--	7.89	--	9.00	11.00	10.85	2.96	--	0.0	
BG-2	5/26/2021	--	2.72	--	9.20	8.91	6.96	4.24	--	0.0	
BG-3	5/26/2021	--	3.58	--	10.00	10.91	10.31	6.73	--	0.0	
SC-1	5/26/2021	--	1.99	--	15.00	15.40	4.74	2.75	--	0.0	
SC-1D	5/26/2021	--	0.00	--	30.00	33.60	4.95	NA	--	0.0	
SC-1DD	5/26/2021	--	0.00	--	60.00	60.00	5.07	NA	--	0.0	
SC-2	5/26/2021	--	2.01	--	15.00	15.80	4.89	2.88	--	0.0	
SC-2D	5/26/2021	--	2.94	--	35.00	34.50	4.68	1.74	--	0.0	
SC-2DD	5/26/2021	--	2.46	--	60.00	62.00	4.69	2.23	--	0.0	
SC-2DDD	5/26/2021	--	2.37	--	78.00	78.90	4.54	2.17	--	0.0	
SC-3	5/26/2021	--	4.68	--	14.00	17.58	7.03	2.35	--	8.0	
SC-3D	5/26/2021	--	5.40	--	35.00	39.00	6.42	1.02	--	0.0	
SC-3DD	5/26/2021	--	5.67	--	65.00	68.05	6.74	1.07	--	2.7	
SC-3DDD	5/26/2021	--	5.76	--	81.00	84.04	6.84	1.08	--	0.8	
SC-4	5/26/2021	--	3.40	--	15.00	15.20	7.11	3.71	--	0.8	
SC-4D	5/26/2021	--	6.99	--	35.00	34.70	7.08	0.09	--	0.1	
SC-4DD	5/26/2021	--	5.92	--	60.00	59.90	6.92	1.00	--	0.5	
SC-SG-1	1/21/2021	--	0.00	--	--	--	-0.98	NA	--	--	

Table 2  
 Hess Corporation Former Port Reading Complex  
 750 Cliff Road, Port Reading NJ  
 Semi-Annual Sitewide Monitoring Well Gauging Data

WELL I.D.	Date	Depth to LNAPL (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	DTB Original (ft)	DTB from TOC (ft)	TOC Elevation (ft)	Water Elevation (ft)	LNAPL Corrected Water Level ( $\rho = 0.82$ )	PID	Notes
SC-SG-1A	1/22/2021	--	0.00	--	--	--	-1.10	1.10	--	--	
SC-SG-2	1/23/2021	--	0.00	--	--	--	-1.64	1.64	--	--	
-- Not Applicable			DTB - Depth to Bottom			LNAPL - Light Non-Aqueous Phase Liquids					
* All Measurements are in feet			TOC - Top of Casing			NM - Not Measured					

**Table 3**  
**Quarterly Landfarms Monitoring Well Gauging Data**  
**Hess Corporation - Former Port Reading Complex**  
**750 Cliff Road**  
**Port Reading, Middlesex County, New Jersey**

Groundwater Gauging Data						
Well I.D.	Date	Depth to Water	DTB from TOC	TOC Elevation	Water Elevation	PID
LN-SW	4/9/2021	3.00	NA	-0.31	3.31	NA
LN-1	4/9/2021	4.83	14.86	10.37	5.54	0.0
LN-2	4/9/2021	5.78	12.00	9.65	3.87	0.0
LN-3	4/9/2021	5.26	13.12	8.92	3.66	0.0
LN-4	4/9/2021	7.37	15.20	10.69	3.32	0.0
LN-5	4/9/2021	6.31	17.55	10.57	4.26	0.0
LN-6	4/9/2021	8.42	17.80	12.15	3.73	0.0
LN-7	4/9/2021	8.85	17.90	13.30	4.45	0.0
PER-4	4/9/2021	6.59	16.45	10.30	3.71	0.0
LPG-2	4/9/2021	2.58	9.60	7.05	4.47	0.0
DB-SW	4/9/2021	7.00	NA	-0.11	7.11	NA
LS-1R	4/9/2021	3.28	16.00	12.25	8.97	1.1
LS-2	4/9/2021	2.32	12.44	9.75	7.43	3.8
LS-3	4/9/2021	1.30	13.10	8.40	7.10	6.2
LS-4	4/9/2021	1.79	13.30	9.28	7.49	1.7
TM-6R	4/9/2021	4.60	20.40	14.26	9.66	67.6
PL-1RR	4/9/2021	0.51	15.20	7.36	6.85	0.2
PL-3R	4/9/2021	3.64	19.15	10.16	6.52	3.6
PL-6RR	4/9/2021	1.27	15.10	6.88	5.61	0.0
PL-9R	4/9/2021	1.98	20.47	9.11	7.13	2.1
L1-SW	4/9/2021	1.00	NA	-0.20	1.20	NA
L1-1	4/9/2021	NM	NM	9.91	NM	NA
L1-2	4/9/2021	6.12	14.90	9.05	2.93	0.0
L1-3	4/9/2021	6.47	11.10	9.33	2.86	0.0
L1-4	4/9/2021	7.73	11.20	10.85	3.12	0.0
BG-2	4/9/2021	2.31	9.20	6.96	4.65	0.0
BG-3	4/9/2021	3.97	13.86	10.31	6.34	0.0
SP-1	4/9/2021	NM	NM	8.95	NM	NA
SP-2	4/9/2021	NM	NM	10.18	NM	NA
SP-3	4/9/2021	3.73	13.10	9.33	5.60	0.0

\*Anomalous measurement/not used in contour figure

LNAPL - Light non Aqueous Phase Liquids

NA - Not Applicable

DTB - Depth to Bottom NM - Not Measured

All Measurements are in feet

TOC - Top of Casing

Table 4  
 Monitoring Well Gauging Table - Historic LNAPL Hess Corporation - Former Port Reading Complex 750 Cliff Road  
 Port Reading, Middlesex County, New Jersey  
 First Quarter

First Quarter	2015						2016					
	January	RIM Actions	February	RIM Actions	March	RIM Actions	January	RIM Actions	February	RIM Actions	March	RIM Actions
FA-3	NI	NA	NI	NA	NI	NA	NI	NA	NI	NA	NI	NA
FA-5	NI	NA	NI	NA	NI	NA	NI	NA	NI	NA	NI	NA
PL-1RR	0.00	NA	0.00	NA	0.00	NA	Sheen	NA	Sheen	NA	Sheen	NA
PL-2	0.02	Sock deployed	0.02	Sock deployed	0.02	Sock deployed	0.01	Sock deployed	Sheen	NA	Sheen	NA
PL-5/PL-5R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PL-8R	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PL-9R	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TF-1	NM	NA	NM	NA	0.03	Sock deployed	0.00	NA	0.00	NA	0.00	NA
TF-2	NM	NA	NM	NA	0.24	Sock deployed	NM	NA	0.10	Sock deployed	0.59	Sock deployed
TM-7	0.01	Sock deployed	0.01	Sock deployed	0.01		0.00	NA	0.00	NA	0.00	NA
TR-2R	0.01	Sock deployed	0.01	Sock deployed	0.01	Sock deployed	0.00	NA	0.00	NA	0.05	Sock deployed
TR-4R	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	Sheen	NA
TR-4D	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TR-5	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TR-6	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TR-6D	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
Interceptor Trench	NM	NA	NM	NA	NM	NA	NM	NA	NM	NA	NM	NA
First Quarter	2017						2018					
	January	RIM Actions	February	RIM Actions	March	RIM Actions	January	RIM Actions	February	RIM Actions	March	RIM Actions
FA-3	NI	NA	NI	NA	NI	NA	NI	NA	NI	NA	NI	NA
FA-5	NI	NA	NI	NA	NI	NA	0.01	Sock deployed	0.02	NA	Sheen	NA
PL-1RR	Sheen	NA	Sheen	NA	Sheen	NA	Sheen	NA	Sheen	NA	Sheen	NA
PL-2	Sheen	NA	Sheen	NA	Sheen	NA	Sheen	NA	Sheen	NA	Sheen	NA
PL-5/PL-5R	NM	NA	NM	NA	0.00	NA	1.63	NA	NM	NA	1.25	Sock deployed
PL-8R	Sheen	NA	Sheen	NA	Sheen	NA	0.00	NA	N	NA	0.00	NA
PL-9R	0.00	NA	0.00	NA	0.00	NA	Sheen	NA	0.00	NA	0.00	NA
TF-1	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TF-2	0.02	Sock deployed	0.03	Sock deployed	0.01	Sock deployed	0.02	Sock deployed	0.03	Sock deployed	0.01	Sock deployed
TM-7	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.01	Sock deployed
TR-2R	0.00	NA	0.00	NA	0.00	NA	0.00	NA	NM	NA	0.04	NA
TR-4R	0.00	NA	NM	NA	Sheen	NA	NM	NA	NM	NA	NM	NA
TR-4D	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TR-5	0.00	NA	0.00	NA	Sheen	NA	0.00	NA	0.00	NA	0.00	NA
TR-6	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TR-6D	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
Interceptor Trench	0.30	NA	0.12	20 Gallons Removed	0.20	NA	0.50	437 Gallons Removed	0.50	NA	Indeterminable	NA
First Quarter	2019						2020					
	January	RIM Actions	February	RIM Actions	March	RIM Actions	January	RIM Actions	February	RIM Actions	March	RIM Actions
FA-3	NI	NA	NI	NA	NI	NA	NI	NA	NI	NA	NI	NA
FA-5	NI	NA	NI	NA	NI	NA	NI	NA	NI	NA	NI	NA
PL-1RR	0.00	NA	0.00	NA	Sheen	NA	Sheen	NA	Sheen	NA	Sheen	NA
PL-2	0.00	NA	0.00	NA	Sheen	NA	Sheen	Sock deployed	0.00	NA	0.00	NA
PL-5/PL-5R	0.02	Sock Deployed	0.00	NA	0.00	NA	0.05	Sock deployed	Sheen	Sock deployed	Sheen	Sock deployed
PL-8R	Sheen	NA	Sheen	NA	Sheen	NA	0.00	NA	0.00	NA	Sheen	NA
PL-9R	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TF-1	0.00	NA	0.00	NA	0.00	NA	Sheen	Sock deployed	0.00	NA	0.00	NA
TF-2	0.01	Sock Deployed	Sheen	NA	0.00	NA	Sheen	Sock deployed	Globules	Sock deployed	Sheen	NA
TM-7	Sheen	NA	0.00	NA	Sheen	NA	0.00	NA	Sheen	NA	Sheen	Sock deployed
TR-2R	0.00	NA	0.00	NA	0.00	NA	0.00	NA	Sheen	NA	0.00	NA
TR-4R	0.00	NA	0.00	NA	0.00	NA	Sheen	NA	0.00	NA	NM	NA
TR-4D	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TR-5	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TR-6	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TR-6D	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
Interceptor Trench	0.10	228 Gallons Removed	0.10	NA	0.50	NA	1.40	NA	1.20	307 Gallons Removed from Interceptor Trench	1.00	NA
First Quarter	2021											
	January	RIM Actions	February	RIM Actions	March	RIM Actions						
FA-3	0.10	Sock deployed	NM/NM	NA	0.00/0.00	Product Bailer deployed						
FA-5	Sheen	Sock deployed	Sheen/Sheen	Product Bailer deployed/Product Bailer deployed	Sheen/Sheen	Product Bailer deployed/Product Bailer deployed						
PL-1RR	Sheen	Sock deployed	NM/NM	NA	Iron Sheen/Iron Sheen	NA						
PL-2	0.00	NA	NM/Iron Sheen	NA	Iron Sheen/Iron Sheen	NA						
PL-5/PL-5R	Sheen	Sock deployed	NM/NM	NA	Sheen/Sheen	Sock deployed						
PL-8R	0.00	NA	NM/0.00	NA	0.00/0.00	NA						
PL-9R	Iron Sheen	NA	NM/Iron Sheen	NA	0.00/0.00	NA						
TF-1	Sheen	Sock deployed	NM/Iron Sheen	NA	Sheen/Sheen/Sheen	Sock deployed						
TF-2	Discontinuous LNAPL	Sock deployed	NM/Discontinuous LNAPL	NA/Sock Deployed	LNAPL/LNAPL/LNAPL	Sock deployed						
TM-7	Sheen	Sock deployed	NM/0.00	NA	0.00	NA						
TR-2R	0.00	Sock deployed	NM/NM	NA	Sheen/Sheen	NA						
TR-4R	0.00	NA	NM/NM	NA	0.00	NA						

Table 4  
 Monitoring Well Gauging Table - Historic LNAPL Hess Corporation - Former Port Reading Complex 750 Cliff Road  
 Port Reading, Middlesex County, New Jersey  
 Second Quarter

Second Quarter	2015						2016					
	April	RIM Actions	May	RIM Actions	June	RIM Actions	April	RIM Actions	May	RIM Actions	June	RIM Actions
FA-3	NI	NA	NI	NA	NI	NA	NI	NA	NI	NA	NI	NA
FA-5	NI	NA	NI	NA	NI	NA	NI	NA	NI	NA	NI	NA
PL-1RR	NM	NA	Sheen	NA	Sheen	NA	Sheen	NA	Sheen	NA	Sheen	NA
PL-2	0.01	Sock deployed	0.01	Sock deployed	0.05	Sock deployed	0.00	NA	Sheen	NA	Sheen	NA
PL-5/PL-5R	NA	NA	0.02	Sock deployed	0.01	NA	NA	NA	NA	0.00	NA	NA
PL-9R	NA	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	NA	NA
TF-1	0.01	Sock deployed	0.01	Sock deployed	0.01	Sock deployed	0.00	NA	0.00	NA	0.00	NA
TF-2	0.01	Sock deployed	0.02	Sock deployed	0.01	Sock deployed	0.60	Sock deployed	0.60	Sock deployed	0.58	Sock deployed
TM-6R	0.00	NA	Sheen	NA	Sheen	NA	0.00	NA	0.00	NA	0.00	NA
TM-7	Sheen	NA	0.01	Sock deployed	0.01	Sock deployed	<0.1	Sock deployed	<0.1	Sock deployed	0.05	Sock deployed
TR-2R	Sheen	NA	Sheen	NA	0.01	Sock deployed	0.07	Sock deployed	0.08	Sock deployed	0.07	Sock deployed
TR-4R	NM	NA	0.00	NA	0.00	NA	Sheen	NA	NM	NA	0.00	NA
TR-5	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TR-6	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TR-6D	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TR-Sump-3	0.00	NA	0.00	NA	0.30	Sock deployed	0.00	NA	0.00	NA	0.00	NA
Interceptor Trench	NM	NA	NM	NA	NM	NA	NM	NA	NM	NA	NM	NA
Second Quarter	2017						2018					
	April	RIM Actions	May	RIM Actions	June	RIM Actions	April	RIM Actions	May	RIM Actions	June	RIM Actions
FA-3	NI	NA	NI	NA	NI	NA	NI	NA	NI	NA	NI	NA
FA-5	NI	NA	NI	NA	NA	NA	NI	NA	NI	NA	NI	NA
PL-1RR	0.00	NA	Sheen	NA	0.01	Sock deployed	Sheen	NA	0.01	Sock deployed	0.01	Sock deployed
PL-2	Sheen	NA	Sheen	NA	Sheen	NA	Sheen	NA	0.00	NA	NM	NA
PL-5/PL-5R	0.00	NA	0.00	NA	NM	NA	1.00	Sock deployed	0.00	NA	0.17	Sock deployed
PL-9R	0.00	NA	0.00	NA	NM	NA	Sheen	NA	0.00	NA	0.00	NA
TF-1	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	NM	NA
TF-2	0.01	Sock deployed	0.01	NA	0.01	Sock deployed	0.01	Sock deployed	1.83	Sock deployed	0.02	Sock deployed
TM-6R	0.00	NA	0.00	NA	0.00	NA	Sheen	NA	0.00	NA	0.00	NA
TM-7	0.00	NA	Sheen	NA	Sheen	NA	0.02	Sock deployed	0.00	NA	NM	NA
TR-2R	0.00	NA	NM	NA	0.00	NA	NM	NA	NM	NA	NM	NA
TR-4R	0.00	NA	NM	NA	0.00	NA	NM	NA	NM	NA	NM	NA
TR-5	Sheen	NA	Sheen	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TR-6	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	NM	NA
TR-6D	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	NM	NA
TR-Sump-3	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
Interceptor Trench	0.12	1540 Gallons Removed		NM	2666 Gallons Removed		0.5	761 Gallons Removed		0.05	NA	55 Gallons Removed
Second Quarter	2019						2020					
	April	RIM Actions	May	RIM Actions	June	RIM Actions	April	RIM Actions	May	RIM Actions	June	RIM Actions
FA-3	NI	NA	NI	NA	NI	NA	NM	NA	0.00	NA	0.00	NA
FA-5	NI	NA	NI	NA	NI	NA	NM	NA	Globules	Sock deployed	Globules	Sock deployed
PL-1RR	Sheen	NA	Sheen	NA	Sheen	NA	Sheen	Sock deployed	Sheen	Sock deployed	Sheen	Sock deployed
PL-2	0.00	NA	0.00	NA	0.00	NA	0.00	NA	Globules	Sock deployed	0.00	NA
PL-5/PL-5R	Globules	Sock deployed	Globules	Sock deployed	Globules	Sock Deployed	Sheen	Sock deployed	Sheen	Sock deployed	0.20	Sock deployed
PL-9R	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TF-1	0.00	NA	0.00	NA	0.00	NA	0.00	NA	Globules	Sock deployed	NM	NA
TF-2	0.00	NA	0.00	NA	0.00	NA	Sheen	NA	0.00	Sock deployed	NM	NA
TM-6R	0.00	NA	0.00	NA	0.00	NA	0.00	NA	Sheen	Sock deployed	0.00	NA
TM-7	0.00	NA	0.00	NA	NM	NA	Sheen	Sock deployed	Globules	Sock deployed	Sheen	Sock deployed
TR-2R	0.00	NA	0.00	NA	NM	NA	Sheen	NA	Sheen	Sock deployed	Globules	Sock deployed
TR-4R	0.00	NA	NM	NA	NM	NA	NM	NA	0.00	NA	0.00	0.00
TR-5	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TR-6	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	0.00
TR-6D	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	0.00
TR-Sump-3	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	0.00
Interceptor Trench	0.05	229 Gallons Removed		Indeterminable	100 Gallons Removed		0.03	393 Gallons Removed		0.35	NA	1.6
Second Quarter	2021											
	April	RIM Actions	May	RIM Actions	June	RIM Actions	April	RIM Actions	May	RIM Actions	June	RIM Actions
FA-3	Discontinuous LNAPL/Discontinuous LNAPL	Sock deployed/Sock deployed	Discontinuous LNAPL/Discontinuous LNAPL	Sock deployed/Sock deployed	Discontinuous LNAPL	Placed Product Bailer						
FA-5	Discontinuous Sheen/Discontinuous Sheen	Placed Product Bailer/Placed Product Bailer	Discontinuous Sheen/Discontinuous Sheen	Placed Product Bailer/Placed Product Bailer	Discontinuous LNAPL	Placed Product Bailer						
PL-1RR	Sheen/Sheen	Sock deployed/Sock deployed	Sheen/Sheen	Sock deployed/Sock deployed	Sheen	Sock deployed						
PL-2	0.00/0.00	NA/NA	0.00/0.00	NA/NA	0.00	NA						
PL-5/PL-5R	Discontinuous LNAPL/Sheen	Sock deployed/Sock deployed	Discontinuous LNAPL/Sheen	Sock deployed/Vaced Out	Discontinuous LNAPL	Sock deployed						
PL-9R	0.00/0.00	NA/NA	0.00/0.00	NA/NA	0.00	NA						
TF-1	Discontinuous Sheen/0.00	Sock deployed/NA	0.00/NM	NA/NA	NM	NA						
TF-2	Discontinuous Sheen/Discontinuous Sheen	Sock deployed/Sock deployed	Discontinuous Sheen/NM	Sock deployed/NA	Discontinuous Sheen	Sock deployed						
TM-6R	0.00/0.00	NA/NA	0.00/0.00	NA/NA	0.00	NA						
TM-7	Sheen/0.00	Sock deployed/NA	0.00/0.00	NA/NA	0.00	NA						
TR-2R	Discontinuous Sheen/0.00	Sock deployed/NA	NM/Sheen	NA/Sock deployed	NM	NA						
TR-4R	0.00/0.00	NA/NA	NM/0.00	NA/NA	0.00	NA						
TR-5	0.00/0.00	NA/NA	0.00/0.00	NA/NA	0.00	NA						
TR-6	0.00/0.00	NA/NA	0.0									

Table 4  
 Monitoring Well Gauging Table - Historic LNAPL Hess Corporation - Former Port Reading Complex 750 Cliff Road  
 Port Reading, Middlesex County, New Jersey  
 Third Quarter

Third Quarter	2015						2016					
	July	RIM Actions	August	RIM Actions	September	RIM Actions	July	RIM Actions	August	RIM Actions	September	RIM Actions
FA-3	NI	NA	NI	NA	NI	NA	NI	NA	NI	NA	NI	NA
FA-5	NI	NA	NI	NA	NI	NA	NI	NA	NI	NA	NI	NA
PL-1RR	0.01	Sock deployed	0.01	Sock deployed	0.17	Sock Deployed	Sheen	NA	Sheen	NA	Sheen	NA
PL-2	0.02	Sock deployed	0.02	Sock deployed	0.04	Sock Deployed	0.00	NA	0.00	NA	0.00	NA
PL-5/PL-5R	NM	NA	NM	NA	NM	NA	NA	NA	NA	NA	NA	NA
PL-8R	0.00	NA	0.00	NA	0.00	NA	NA	NA	NA	NA	NA	NA
PL-9R	Sheen	NA	Sheen	NA	Sheen	NA	0.00	NA	0.00	NA	0.00	NA
TF-1	NM	NA	NM	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TF-2	NM	NA	NM	NA	NM	NA	0.50	Sock deployed	0.38	Sock deployed	0.28	Sock deployed
TF-3	NM	NA	0.00	NA	0.00	NA	Sheen	NA	0.00	NA	0.00	NA
TM-6R	NM	NA	NM	NA	NM	NA	0.00	NA	0.00	NA	0.00	NA
TM-7	0.05	Sock deployed	0.07	Sock deployed	0.01	Sock Deployed	0.05	Sock deployed	Sheen	NA	0.00	NA
TR-2R	0.01	Sock deployed	0.01	Sock deployed	0.02	Sock Deployed	0.03	Sock deployed	<0.1	Sock deployed	0.00	NA
TR-4R	0.00	NA	0.00	NA	0.00	NA	Sheen	NA	NM	NA	0.00	NA
TR-4DD	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TR-6	0.01	Sock deployed	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TR-6D	0.02	Sock deployed	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
Interceptor Trench	NM	NA	NM	NA	NM	NA	NA	NA	NA	NA	NA	280 Gallons Removed
Third Quarter	2017						2018					
July	RIM Actions	August	RIM Actions	September	RIM Actions	July	RIM Actions	August	RIM Actions	September	RIM Actions	
FA-3	NI	NA	NI	NA	NI	NA	NI	NA	NI	NA	NI	NA
FA-5	NI	NA	NI	NA	NI	NA	NI	NA	NI	NA	NI	NA
PL-1RR	0.01	NA	Sheen	NA	Sheen	NA	0.00	NA	0.00	NA	0.00	NA
PL-2	Sheen	Socky Deployed	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
PL-5/PL-5R	NM	NA	Sheen	NA	Sheen	NA	1.50	Socky Deployed	1.35	Socky Deployed	1.75	Socky Deployed
PL-8R	NM	NA	0.00	NA	0.00	NA	0.01	Socky Deployed	0.00	NA	0.00	NA
PL-9R	0.00	NA	0.00	0.00	NA	0.00	0.00	NA	0.00	NA	0.00	NA
TF-1	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TF-2	0.01	Socky Deployed	0.00	NA	0.01	Sock Deployed	0.00	NA	Sheen	NA	0.00	NA
TF-3	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TM-6R	0.00	NA	0.00	NA	0.00	NA	0.00	NA	Sheen	NA	Sheen	NA
TM-7	Sheen	NA	0.00	NA	0.00	NA	0.00	NA	Sheen	NA	Sheen	NA
TR-2R	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TR-4R	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TR-4DD	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TR-6	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TR-6D	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
Interceptor Trench	0.5	NA	Indeterminable	NA	Indeterminable	NA	NA	NA	NA	857 Gallons Removed	NA	2018 Gallons Removed
Third Quarter	2019						2020					
July	RIM Actions	August	RIM Actions	September	RIM Actions	July	RIM Actions	August	RIM Actions	September	RIM Actions	
FA-3	NI	NA	NI	NA	NI	0.00	NA	0.00	NA	0.00	NA	NA
FA-5	NI	NA	NI	NA	NI	Sheen	Sock deployed	Sheen	Sock deployed	Sheen	Sock deployed	Sheen
PL-1RR	indeterminable	Sock deployed	NA	NA	Globules	Sock deployed	Sheen	Sock deployed	Sheen	Sock deployed	Sheen	Sock deployed
PL-2	0.00	NA	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	NA
PL-5/PL-5R	indeterminable	Sock deployed	NA	NA	NM	NA	indeterminable	Sock deployed	0.70	Sock deployed	0.25	Sock deployed
PL-8R	0.00	NA	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	NA
PL-9R	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TF-1	0.00	NA	NA	0.00	NA	Sheen	Sock deployed	Sheen	Sock deployed	Sheen	Sock deployed	Sheen
TF-2	Globules	Sock deployed	NA	NA	Globules	Sock deployed	Sheen	Sock deployed	Sheen	Sock deployed	Sheen	Sock deployed
TF-3	0.00	NA	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	NA
TM-6R	0.00	NA	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	NA
TM-7	Globules	Sock deployed	NA	NA	0.00	NA	Sheen	NA	Sheen	NA	Sheen	NA
TR-2R	0.00	NA	NA	0.00	NA	Sheen	Sock deployed	Sheen	NA	Sheen	NA	NA
TR-4R	0.00	NA	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	NA
TR-4DD	0.00	NA	0.00	NA	0.00	NA	Sheen	NA	Sheen	NA	Sheen	NA
TR-6	0.00	NA	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	NA
TR-6D	0.00	NA	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	NA
Interceptor Trench	NM	95 Gallons Removed from PL-5R and Interceptor Trench	NM	NA	NM	157 Gallons Removed from Interceptor Trench	0.5	202 Gallons Removed from Interceptor Trench and PL-5R	1.6	NA	0.8	229 Gallons Removed from Interceptor Trench and PL-5R

Table 4  
 Monitoring Well Gauging Table - Historic LNAPL Hess Corporation - Former Port Reading Complex 750 Cliff Road  
 Port Reading, Middlesex County, New Jersey  
 Fourth Quarter

Fourth Quarter	2015						2016					
	October	RIM Actions	November	RIM Actions	December	RIM Actions	October	RIM Actions	November	RIM Actions	December	RIM Actions
FA-3	NI	NA	NI	NA	NA	NA	NI	NA	NI	NA	NI	NA
FA-5	NI	NA	NI	NA	NA	NA	NI	NA	NI	NA	NI	NA
PL-1RR	0.11	Sock deployed	0.10	Sock deployed	0.01	Socky Deployed	Sheen	NA	0.01	Sock deployed	Sheen	NA
PL-2	0.02	Sock deployed	0.10	Sock deployed	0.01	Socky Deployed	0.03	Sock deployed	0.01	Sock deployed	0.00	NA
PL-5/PL-5R	NM	NA	NM	NA	NM	NA	NM	NA	NM	NA	NM	NA
PL-8R	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Sheen	NA
PL-9R	Sheen	NA	0.00	NA	NA	NA	0.00	0.00	NM	NA	0.00	NA
TF-1	0.00	NA	0.00	NA	NA	NA	0.00	NA	NM	NA	0.00	NA
TF-2	NM	NA	0.00	NA	0.10	Socky Deployed	0.20	Sock deployed	0.40	Sock deployed	0.02	Sock Deployed
TM-7	0.01	Sock deployed	0.00	NA	NA	NA	0.00	NA	NM	NA	0.00	NA
TR-2R	0.03	Sock deployed	0.00	NA	0.01	Socky Deployed	0.00	NA	NM	NA	0.00	NA
TR-5	0.00	NA	0.00	NA	0.00	NA	0.00	NA	NM	NA	0.00	NA
TR-6	0.00	NA	0.00	NA	0.00	NA	0.00	NA	NM	NA	0.00	NA
TR-6D	0.00	NA	0.00	NA	0.00	NA	0.00	NA	NM	NA	0.00	NA
Interceptor Trench	NM	NA	NM	NA	NA	NA	NM	NA	0.6	30 Gallons Removed	NM	NA
Fourth Quarter	2017						2018					
	October	RIM Actions	November	RIM Actions	December	RIM Actions	October	RIM Actions	November	RIM Actions	December	RIM Actions
FA-3	NI	NA	NI	NA	NI	NA	NI	NA	NI	NA	NI	NA
FA-5	NI	NA	NI	NA	NI	NA	NI	NA	NI	NA	NI	NA
PL-1RR	0.01	NA	0.02	Sock deployed	0.02	Sock deployed	NM	NA	NM	NA	NM	NA
PL-2	Sheen	NA	Sheen	NA	Sheen	NA	0.00	NA	0.00	NA	0.00	NA
PL-5/PL-5R	0.00	NA	1.10	Sock deployed	0.57	Sock deployed	0.01	Sock deployed	0.00	NA	0.00	NA
PL-8R	0.00	NA	Sheen	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
PL-9R	0.00	NA	Sheen	NA	Sheen	NA	0.00	NA	0.00	NA	0.00	NA
TF-1	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TF-2	NM	NA	0.03	Sock deployed	0.03	Sock deployed	0.01	Sock deployed	0.00	NA	0.00	NA
TM-7	0.00	NA	Sheen	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TR-2R	0.00	NA	0.00	NA	0.00	NA	NM	NA	0.00	NA	NM	NA
TR-5	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TR-6	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TR-6D	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
Interceptor Trench	0.50	NA	Indeterminable	NA	Indeterminable	Interceptor Trench Vacuumed Out	NM	1336 Gallons Removed	NM	11 Gallons Removed	NM	NA
Fourth Quarter	2019						2020					
	October	RIM Actions	November	RIM Actions	December	RIM Actions	October	RIM Actions	November	RIM Actions	December	RIM Actions
FA-3	NI	NA	NI	NA	NI	NA	0.00	NA	NM	NA	Sheen	Sock deployed
FA-5	NI	NA	NI	NA	NI	NA	Sheen	Sock deployed	NM	NA	Sheen	Sock deployed
PL-1RR	Sheen	Sock deployed	Sheen	Sock deployed	Sheen	NA	Sheen	Sock deployed	Sheen	Sock deployed	Sheen	NA
PL-2	Sheen	Sock deployed	Sheen	Sock deployed	0.00	NA	Orange Rust	Sock deployed	0.00	NA	0.00	NA
PL-5/PL-5R	Indeterminable	Sock deployed	0.50	Sock deployed	0.02	Sock deployed	0.30	Sock deployed	Sheen	Sock deployed	Sheen	NA
PL-8R	0.00	NA	0.00	NA	NM	NA	0.00	NA	0.00	NA	0.00	NA
PL-9R	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TF-1	NM	NA	0.01	Sock deployed	0.00	NA	Sheen	Sock deployed	Sheen	Sock deployed	Sheen	NA
TF-2	NM	NA	Sheen	Sock deployed	0.00	NA	Sheen	NA	Sheen	Sock deployed	0.03	Sock deployed
TM-7	Globules	Sock deployed	Globules	Sock deployed	NM	NA	Sheen	NA	Sheen	NA	Sheen	NA
TR-2R	0.00	NA	0.00	NA	NM	NA	Sheen	Sock deployed	NM	NA	Sheen	NA
TR-5	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TR-6	0.00	NA	N/A	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
TR-6D	0.00	NA	N/A	NA	0.00	NA	0.00	NA	0.00	NA	0.00	NA
Interceptor Trench	NM	NA	NM	NA	1.20	278 Gallons Removed from PL-5R and Interceptor Trench	1.7	157 Gallons Removed from Interceptor Trench and PL-5R	1.6	NA	1.2	1114 Gallons Removed from Interceptor Trench and FA-3

NM = Not Measured  
 N/A = Not Applicable  
 NI = Not Installed

## **Appendix A**

## STRAIGHT BILL OF LADING - SHORT FORM

NOTICE: Shippers of hazardous materials must enter 24-hour emergency response telephone number under "Emergency Response Phone Number."

## Shipping Order

*Crane Industrial Recovery*

Date May 10, 2021 Bill of Lading No. 057021-10551

Shipper No. \_\_\_\_\_

Carrier No. \_\_\_\_\_

*Tread Rich*

TO: Consignee <i>lorco</i>	FROM: Shipper <i>HEX Remodeling</i>			
Street <i>450 East Front St - Elizabeth</i>	Street <i>750 Clark Rosen - Port Remodeling</i>			
Destination <i>Elizabeth</i>	Origin <i>Port Remodeling</i>			
Route: <i>B&amp;W</i>	Vehicle No. <i>16</i>			
No. Shipping Units <input checked="" type="checkbox"/> HM	Kind of Packaging, Description of Articles Special Marks and Exceptions <i>Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation with ordinary care. See Section 2(e) of National Motor Freight Classification, Item 360</i>	SCAC <i>16</i>	Zip Code <i>07201</i>	Emergency Response Phone Number

<i>Glass Recyclable containers to be ID-72.</i>		Weight (Subject to Correction)*	Rate or Class	CHARGES
<i>Non DOT / Non R.R.</i>		<i>NSP-0033072</i>	<i>(P.C.W)</i>	
<small>*If the shipment requires by law two parts by a carrier between the place where the bill of lading state weight is entered or shipper's weight</small>		C.O.D. Amount	C.O.D. FEE: PREPAID <input type="checkbox"/> COLLECT <input type="checkbox"/>	CHARGES
<small>Note-Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.</small>		<small>Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement.</small>		
<small>The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding</small>		<small>The carrier shall not make delivery of this shipment without payment of freight and all other charges.</small>		
(Signature of Consignor)				

RECEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted [contents and condition of contents of packages unknown], marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth, [1] in Uniform Freight Classification in effect on the date hereof, if this is a rail or a rail-water shipment or [2] in the applicable motor carrier classification or tariff, if this is a motor carrier shipment. Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

Mark with "RQ" if appropriate to designate Hazardous Materials as defined in the U.S. Department of Transportation Regulations governing the transportation of hazardous materials. The use of this column is an optional method for identifying hazardous materials on Bills of Lading per 172.201(e)(1)(iii) of Title 49 Code of Federal Regulations. Also when shipping hazardous materials, the shipper's certification statement prescribed in section 172.204(a) of the Federal Regulations, as indicated on the Bill of Lading does apply, unless a specific exemption from the requirement is provided in the Regulation for a particular material.

The format and content of hazardous item list is the responsibility of individual company interpretation of requirements as described in 49 Code of Federal Regulations, Subpart C-Shipping Papers. Such description consists of the following per Sections 172.201 (Hazardous Material Table) and Sections 172.202 and 172.203: Proper shipping name, hazardous class, UN identification number, packing group, and subsidiary classes.

Note: Liability limitation for loss or damage in this shipment may be applicable. See 49 United States Code, Sections 14706(e)(1)(A) and (B).

## SHIPPER

## CARRIER

## PER

## PER

**2** This is to certify that the above named materials are properly classified, packaged, marked, and labeled, and are in proper condition for transportation according to the applicable regulations of the U.S. Department of Transportation.

Carrier acknowledges receipt of packages and any required placards. Carrier certifies emergency response information was made available and/or carrier has the U.S. Department of Transportation emergency response guidebook or equivalent documentation in the vehicle. Property described above is received in good order, except as noted.



KRAFT INDUSTRIAL CLEANING, INC.  
827 East Linden Ave., PO Box 4065  
Linden, NJ 07036

(908) 862-4141 Fax: (908) 862-4112  
mike@kraftindustrialcleaning.com



Celebrating 10 Years in Business

DAILY WORK SHEET		Start <u>0500</u>	AM PM	Date <u>May 20-2024</u>	
14097		Finish	AM PM	P.O.#	
CUSTOMER: BILL TO:  <u>Hess Corp — 601 Hack Stree West Penn.</u>		WORK SITE: <u>Hess Remediation At Buckeye Port Refining</u>  <u>Remove the tank serous vac out pump tanks disposse to Worco</u>			
EMPLOYEE NAME  <u>Aaron Bruce</u>	CLASS	HOURS		RATES	AMOUNT
		ST	OT	DT	
LABOR TOTAL					
EQUIPMENT		HOURS		RATE	AMOUNT
PICKUP  <u>B</u> VAC TRUCK / TRAILER BOX-TRUCK					
EQUIPMENT TOTAL					
EQUIPMENT/MATERIALS		QTY		UNIT COST	AMOUNT
TOLLS					
AIR COMPRESSOR					
GENERATOR					
INTRINSICALLY SAFE LIGHTING					
TANK FAN / AIR DRILL / AIR HORN					
CHEMICAL / AIR DIAPHRAM PUMP					
BERM(S)					
PERSONAL PROTECTIVE & SAFETY EQUIPMENT					
<u>Bof 052021-Hess-1</u>				<u>323</u>	
MATERIAL TOTAL					
TOTAL					

CUSTOMER APPROVAL Agent of Hess Inc

Visit us @ [www.KraftIndustrialCleaning.com](http://www.KraftIndustrialCleaning.com)

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VETERAN OWNED BUSINESS



TL2  
KRAFT INDUSTRIAL CLEANING, INC.  
827 East Linden Ave., PO Box 4065  
Linden, NJ 07036

(908) 862-4141 Fax: (908) 862-4112  
mike@kraftindustrialcleaning.com



Celebrating 10 Years in Business

DAILY WORK SHEET		Start <u>13 00</u>	AM PM	Date <u>June 15 2021</u>			
14199		Finish	AM PM	P.O.#			
CUSTOMER: BILL TO: <u>Hess-</u>		WORK SITE: <u>Hess. Remodeling</u> <u>750 Cliff Road. Peapack</u> <u>New Jersey</u>					
		WORK INSTRUCTIONS: <u>Through Vac Truck Saws to Ute.</u> <u>Get Pipe Thread Patch Ready To Weld</u>					
EMPLOYEE NAME <u>Anthony Bruno</u>	CLASS <u>Op</u>	HOURS		RATES		AMOUNT	
		ST	OT	DT	STRAIGHT		X 1.5
						LABOR TOTAL	
EQUIPMENT			HOURS		RATE		AMOUNT
PICKUP							
VAC TRUCK / TRAILER							
BOX TRUCK							
						EQUIPMENT TOTAL	
EQUIPMENT/MATERIALS			QTY		UNIT COST		AMOUNT
TOLLS - <u>Turpiles</u>							
AIR COMPRESSOR							
GENERATOR							
INTRINSICALLY SAFE LIGHTING							
TANK FAN / AIR DRILL / AIR HORN							
CHEMICAL / AIR DIAPHRAM PUMP							
BERM(S)							
PERSONAL PROTECTIVE & SAFETY EQUIPMENT							
<u>Bo. 1 - 0615 at Hess - 1 mst</u>						MATERIAL TOTAL	
						TOTAL	

CUSTOMER APPROVAL

Agent of Hess GC

Visit us @ [www.KraftIndustrialCleaning.com](http://www.KraftIndustrialCleaning.com)

White - Kraft copy

Yellow - Customer copy



Alvin /

**Straight Bill of Lading - Short Form**

**NOTICE: Shippers of hazardous materials must enter 24-hour emergency response telephone number under "Emergency Response Phone Number" on Shipping Order.**

www.msp.org/mst

## **Appendix B**

The results set forth herein are provided by SGS North America Inc.

**e-Hardcopy 2.0**  
*Automated Report*

## Technical Report for

**Earth Systems, Inc.**

**Former Hess Port Reading Terminal Detention Basin, Port Reading, NJ**

**1114J01.21**

**SGS Job Number: JD24129**

**Sampling Date: 04/23/21**



**Report to:**

**Earth Systems**

**mpiegaro@earthsy.net**

**ATTN: Michael Piegaro**

**Total number of pages in report: 56**



Test results contained within this data package meet the requirements  
of the National Environmental Laboratory Accreditation Program  
and/or state specific certification programs as applicable.

**Caitlin Brice, M.S.  
General Manager**

**Client Service contact: Shalini Williams 732-329-0200**

**Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC,  
OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (ANAB L2248)**

**This report shall not be reproduced, except in its entirety, without the written approval of SGS.  
Test results relate only to samples analyzed.**

**SGS North America Inc. • 2235 Route 130 • Dayton, NJ 08810 • tel: 732-329-0200 • fax: 732-329-3499**

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## Sample Summary

Earth Systems, Inc.

Job No: JD24129

Former Hess Port Reading Terminal Detention Basin, Port Reading, NJ  
Project No: 1114J01.21

Sample Number	Collected Date	Time By	Matrix Received	Code Type	Client Sample ID
JD24129-1	04/23/21	11:35 RC	04/29/21	SO Oil	FA-5
JD24129-2	04/23/21	13:55 RC	04/29/21	SO Oil	TF-2

---

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

## CASE NARRATIVE / CONFORMANCE SUMMARY

**Client:** Earth Systems, Inc.                    **Job No** JD24129  
**Site:** Former Hess Port Reading Terminal Detention Basin, Port Reading,      **Report Date** 5/7/2021 4:11:40 PM

On 04/29/2021, 2 Sample(s) were received at SGS North America Inc. at a maximum corrected temperature of 4.1 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JD24129 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

### GC/LC Semi-volatiles By Method SW846-8015

<b>Matrix:</b> SO	<b>Batch ID:</b> OP33112
-------------------	--------------------------

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- JD24129-1 for Other Patterns: Motor oil
- JD24129-2 for Other Patterns: Motor oil

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS North America Inc indicated via signature on the report cover

**Summary of Hits**

Job Number: JD24129

Account: Earth Systems, Inc.

Project: Former Hess Port Reading Terminal Detention Basin, Port Reading, NJ

Collected: 04/23/21

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD24129-1	FA-5					
Diesel /Fuel oil #2 (C9-C22)		MATCH				SW846-8015
Other Patterns <sup>a</sup>		MATCH				SW846-8015
JD24129-2	TF-2					
Diesel /Fuel oil #2 (C9-C22)		MATCH				SW846-8015
Other Patterns <sup>a</sup>		MATCH				SW846-8015
(a) Motor oil						

**Sample Results**

---

**Report of Analysis**

---

SGS LabLink@1103313 08:53 17-Jun-2021

## Report of Analysis

Page 1 of 1

**Client Sample ID:** FA-5  
**Lab Sample ID:** JD24129-1  
**Matrix:** SO - Oil  
**Method:** SW846-8015 SW846 3546  
**Project:** Former Hess Port Reading Terminal Detention Basin, Port Reading, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	ZZ98921.D	10	05/06/21 19:32	TL	05/06/21 10:30	OP33112	GZZ3638
Run #2							

	Initial Weight	Final Volume
Run #1	1.0 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	Gasoline (C4-C12)	NO MATCH			
	Turpentine (C9-C11)	NO MATCH			
	Mineral Spirits (C9-C12)	NO MATCH			
	Kerosene (C9-C18)	NO MATCH			
	Diesel /Fuel oil #2 (C9-C22)	MATCH			
	Fuel Oil #4 (C11-C24)	NO MATCH			
	Fuel Oil #6 (C11-C26)	NO MATCH			
	Other Patterns <sup>a</sup>	MATCH			

(a) Motor oil

ND = Not detected  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

SGS LabLink@1103313 08:53 17-Jun-2021

## Report of Analysis

Page 1 of 1

4.2  
4

**Client Sample ID:** TF-2  
**Lab Sample ID:** JD24129-2  
**Matrix:** SO - Oil  
**Method:** SW846-8015 SW846 3546  
**Project:** Former Hess Port Reading Terminal Detention Basin, Port Reading, NJ

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	ZZ98923.D	10	05/06/21 20:39	TL	05/06/21 10:30	OP33112	GZZ3638
Run #2							

	Initial Weight	Final Volume
Run #1	1.0 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	Gasoline (C4-C12)	NO MATCH			
	Turpentine (C9-C11)	NO MATCH			
	Mineral Spirits (C9-C12)	NO MATCH			
	Kerosene (C9-C18)	NO MATCH			
	Diesel /Fuel oil #2 (C9-C22)	MATCH			
	Fuel Oil #4 (C11-C24)	NO MATCH			
	Fuel Oil #6 (C11-C26)	NO MATCH			
	Other Patterns <sup>a</sup>	MATCH			

(a) Motor oil

ND = Not detected  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Misc. Forms

### Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody



ACCUTEST

## CHAIN OF CUSTODY

SGS Accutest - Dayton  
2235 Route 130, Dayton, NJ 08810  
TEL. 732-329-0200 FAX: 732-329-3499/3480  
[www.accutest.com](http://www.accutest.com)

PAGE 1 OF 1 PHASE

JD 24129

FED-EX Tracking #	Bottle Only Control #
	BLW-061819-198

SGS Accutest Quote #	SGS Accutest Job #
----------------------	--------------------

Client / Reporting Information		Project Information		Requested Analysis (see TEST CODE sheet)								Matrix Codes							
Company Name Earth Systems, Inc.	Project Name: Port Reading - Former Hess Terminal	Street										DW - Drinking Water							
Street Address 1625 Hwy 71												GW - Ground Water							
City State Zip Belmar NJ 07719	City State											VW - Water							
Project Contact Michael Piegaro mpiegaro@accutest.com	Project # 114501.21											SW - Surface Water							
Phone # 732-739-6444	Fax #											SO - Soil							
Sampler(s) Name(s) Ryan Carr	Phone #	Project Manager		Attention:								SL - Sludge							
												SE - Sediment							
SGS Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Date	Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles	MEI	NaOH	HCO3	H2SO4	None	Ni Water	MECH	ENCORE		OIL Fing Spec S	LAB USE ONLY
1 FA-5			4/23/19		RC	01	3											X	
2 TF-2			4/22/19		RC	01	2											X	G61
Turnaround Time (Business days)				Data Deliverable Information								Comments / Special Instructions							
Approved by (SGS Accutest PM): / Date: per Hess protocol				Commercial "A" (Level 1) Commercial "B" (Level 2) FULL1 (Level 3-4) NJ Reduced Commercial "C" NJ Data of Known Quality Protocol Reporting								NYASP Category A NYASP Category B State Forms EDD Format Other							
												INITIAL ASSESSMENT 3BPP							
												LABEL VERIFICATION							
												Sample inventory is verified upon receipt in the Laboratory							
Sample Custody must be documented below each time sample changes possession, including courier delivery.																			
Relinquished by Sampler: 1	Date/Time: 4/11/19 10:10	Received By: K	Relinquished By: 2	Date/Time: 4/11/19 10:10	Received By: K	Relinquished By: 3	Date/Time: 4/11/19 10:10	Received By: K	Relinquished By: 4	Date/Time: 4/11/19 10:10	Received By: K	Custody Seal #	<input type="checkbox"/> Intact	Preserved where applicable	<input type="checkbox"/>	On Ice	Cooler Temp		
Relinquished by Sampler: 3	Date/Time:	Received By:	Relinquished By:	Date/Time:	Received By:	Relinquished By:	Date/Time:	Received By:	Relinquished By:	Date/Time:	Received By:								
Relinquished by Sampler: 5	Date/Time:	Received By:	Relinquished By:	Date/Time:	Received By:	Relinquished By:	Date/Time:	Received By:	Relinquished By:	Date/Time:	Received By:								

SM088-01C Rev. Date: 9/13/16

JD24129: Chain of Custody

Page 1 of 4

## SGS Sample Receipt Summary

Job Number: JD24129 Client: EARTH SYSTEMS, INC. Project: FORMER HESS PORT READING TERMINAL DE  
 Date / Time Received: 4/29/2021 1:18:00 PM Delivery Method: Airbill #'s:

Cooler Temps (Raw Measured) °C: Cooler 1: (4.8);

Cooler Temps (Corrected) °C: Cooler 1: (4.1);

<u>Cooler Security</u>		<u>Y or N</u>	<u>Y or N</u>	<u>Sample Integrity - Documentation</u>		<u>Y or N</u>
1. Custody Seals Present:	<input checked="" type="checkbox"/> <input type="checkbox"/>	3. COC Present:	<input checked="" type="checkbox"/> <input type="checkbox"/>	1. Sample labels present on bottles:	<input checked="" type="checkbox"/> <input type="checkbox"/>	
2. Custody Seals Intact:	<input checked="" type="checkbox"/> <input type="checkbox"/>	4. Smpl Dates/Time OK	<input checked="" type="checkbox"/> <input type="checkbox"/>	2. Container labeling complete:	<input checked="" type="checkbox"/> <input type="checkbox"/>	
				3. Sample container label / COC agree:	<input checked="" type="checkbox"/> <input type="checkbox"/>	
<u>Cooler Temperature</u>		<u>Y or N</u>		<u>Sample Integrity - Condition</u>		<u>Y or N</u>
1. Temp criteria achieved:	<input checked="" type="checkbox"/> <input type="checkbox"/>		1. Sample rcvd within HT:		<input checked="" type="checkbox"/> <input type="checkbox"/>	
2. Cooler temp verification:	IR Gun		2. All containers accounted for:		<input checked="" type="checkbox"/> <input type="checkbox"/>	
3. Cooler media:	Ice (Bag)		3. Condition of sample:		Intact	
4. No. Coolers:	1					
<u>Quality Control Preservation</u>		<u>Y or N</u>	<u>N/A</u>	<u>Sample Integrity - Instructions</u>		<u>Y or N</u>
1. Trip Blank present / cooler:	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/>	1. Analysis requested is clear:		<input checked="" type="checkbox"/> <input type="checkbox"/>	
2. Trip Blank listed on COC:	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/>	2. Bottles received for unspecified tests		<input type="checkbox"/> <input checked="" type="checkbox"/>	
3. Samples preserved properly:	<input checked="" type="checkbox"/> <input type="checkbox"/>		3. Sufficient volume rcvd for analysis:		<input checked="" type="checkbox"/> <input type="checkbox"/>	
4. VOCs headspace free:	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/>	4. Compositing instructions clear:		<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	
			5. Filtering instructions clear:		<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	

Test Strip Lot #: pH 1-12: 212820 pH 12+: 203117A Other: (Specify) \_\_\_\_\_

Comments Sample -1 and -2 bottle appears to be bi-phasic. 20-25% oil/globular layer on top of AQ. Also did not receive collection time for -1 and -2. Please confirm.

SM089-02 Rev. Date 12/1/16

**JD24129: Chain of Custody**  
**Page 2 of 4**

5.1

Responded to by:

Response Date:

Sample -1 and -2- Please proceed with analysis on the oil phase only.

SM please generate a phase seperation form

Revised 4:59 4/30  
Collection time- FA-5 11:35, TF-2 13:55

5.1

5

**JD24129: Chain of Custody**

**Page 3 of 4**

SGS

ACCUTEST

## CHAIN OF CUSTODY

SGS Accutest - Dayton  
2235 Route 130, Dayton, NJ 08810  
TEL: 732-329-0200 FAX: 732-329-3499/3480  
www.accutest.com

PAGE 1 OF 1 PHASE

PN

JD 24129

Company Name <b>Earth Systems, Inc.</b>		Project Name: <b>Port Reading - Former Hess Terminal</b>		FED-EX Tracking # <i>BN 061819-198</i>		Bottle Order Control # <i>BN 061819-198</i>		SGS Accutest Quote #		SGS Accutest Job #		Matrix Codes				
Street Address <b>1625 Hwy 71</b>		Street City: <b>Belmar</b> State: <b>NJ</b> Zip: <b>07719</b>		Billing Information (If different from Report to)												
Project Contact <b>Michael Piegaro</b> <i>mpiegaro@earth-nj.com</i>		Project # <b>1114501.21</b>		Company Name <b>SAME</b>												
Phone # <b>732-739-6444</b>		Fax #		Client Purchase Order #		Street Address		City		State		Zip				
Sampler(s) Name(s) <b>Ryan Carr</b>		Phone #		Project Manager		Attention:										
SGS Accutest Sample #	Field ID / Point of Collection	MED/VOI Vial #	Collection				Number of preserved Bottles								LAB USE ONLY	
			Date <b>4/23/1</b>	Time	Sampled by	# of bottles	<input type="checkbox"/> SO	<input type="checkbox"/> NaOH	<input type="checkbox"/> HFNC3	<input type="checkbox"/> HFNC4	<input type="checkbox"/> HNO3	<input type="checkbox"/> HCl	<input type="checkbox"/> Ni Nitro	<input type="checkbox"/> MECH		
1	FA-5			RC	01	3										
2	TF-2			RC	01	2								X		
Turnaround Time (Business days)			Data Deliverable Information										Comments / Special Instructions			
<input type="checkbox"/> Std. 10 Business Days <input checked="" type="checkbox"/> 5 Day RUSH <input type="checkbox"/> 3 Day RUSH <input type="checkbox"/> 2 Day RUSH <input type="checkbox"/> 1 Day RUSH <input type="checkbox"/> other _____			Approved by (SGS Accutest PM): Date: <b>per HCSS protocol</b> <hr/> <input type="checkbox"/> Commercial "a" (Level 1) <input type="checkbox"/> Commercial "b" (Level 2) <input type="checkbox"/> FULLT1 (Level 3+4) <input checked="" type="checkbox"/> NJ Reduced <input type="checkbox"/> Commercial "C" <input type="checkbox"/> NJ Data of Known Quality Protocol Reporting Commercial "A" = Results Only, Commercial "B" = Results + QC Summary NJ Reduced = Results + QC Summary + Partial Raw data										<b>INITIAL ASSESSMENT</b> <i>3BPP</i> <b>LABEL VERIFICATION</b> <i>_____</i> Sample inventory is verified upon receipt in the Laboratory			
Emergency & Rush T/A data available VIA LabLink			Sample Custody must be documented below each time samples change possession, including courier delivery.										Date Time: <i>9:00 AM 9/10</i> Received By: <i>Permit Holder</i>			
Relinquished by Sampler: 1		Date Time: <i>9:00 AM 9/10</i>	Received By: <i>Permit Holder</i>	Relinquished By: <i>2</i>		Date Time: <i>9:00 AM 9/10</i>		Received By: <i>Permit Holder</i>		Custody Seal # <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact		Preserved where applicable <input type="checkbox"/>		Date Time: <i>10:00 AM 9/10</i>	Received By: <i>Permit Holder</i>	
Relinquished by Sampler: 3		Date Time: <i>9:00 AM 9/10</i>	Received By: <i>Permit Holder</i>	Relinquished By: <i>3</i>		Date Time: <i>9:00 AM 9/10</i>		Received By: <i>Permit Holder</i>		Custody Seal # <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact		Preserved where applicable <input type="checkbox"/>		Date Time: <i>10:00 AM 9/10</i>	Received By: <i>Permit Holder</i>	
Relinquished by Sampler: 5		Date Time: <i>9:00 AM 9/10</i>	Received By: <i>Permit Holder</i>	Relinquished By: <i>4</i>		Date Time: <i>9:00 AM 9/10</i>		Received By: <i>Permit Holder</i>		Custody Seal # <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact		Preserved where applicable <input type="checkbox"/>		Date Time: <i>10:00 AM 9/10</i>	Received By: <i>Permit Holder</i>	

SM088-01C Rev. Date: 9/13/16

JD24129: Chain of Custody

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JD24129

## Internal Sample Tracking Chronicle

Earth Systems, Inc.

Job No: JD24129

Former Hess Port Reading Terminal Detention Basin, Port Reading, NJ  
Project No: 1114J01.21

Sample Number	Method	Analyzed By	Prepped By	Test Codes
JD24129-1	Collected: 23-APR-21 11:35 By: RC FA-5		Received: 29-APR-21 By: JP	
JD24129-1	SW846-8015	06-MAY-21 19:32 TL	06-MAY-21 TC	B8015FING
JD24129-2	Collected: 23-APR-21 13:55 By: RC TF-2		Received: 29-APR-21 By: JP	
JD24129-2	SW846-8015	06-MAY-21 20:39 TL	06-MAY-21 TC	B8015FING

# SGS Internal Chain of Custody

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Job Number: JD24129  
Account: ESIFLL Earth Systems, Inc.  
Project: Former Hess Port Reading Terminal Detention Basin, Port Reading, NJ  
Received: 04/29/21

Sample/Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD24129-1.1	Dave Hunkele	Secured Storage	05/04/21 13:45	Return to Storage
JD24129-1.1	Secured Storage	Manish Kewalramani	05/06/21 01:19	Retrieve from Storage
JD24129-1.1	Manish Kewalramani	Secured Staging Area	05/06/21 01:20	Return to Storage
JD24129-1.1	Secured Staging Area	Chatiyah Canaday	05/06/21 05:47	Retrieve from Storage
JD24129-1.1	Chatiyah Canaday	Secured Storage	05/06/21 13:56	Return to Storage
JD24129-1.1	Dominic Guerriero		06/07/21 07:27	Disposed
JD24129-1.1.1	Chatiyah Canaday	Organics Prep	05/06/21 06:01	Extract from JD24129-1.1
JD24129-1.1.1	Organics Prep	Taylor Cavanaugh	05/06/21 14:38	Extract from JD24129-1.1
JD24129-1.1.1	Taylor Cavanaugh	Extract Storage	05/06/21 14:38	Return to Storage
JD24129-1.1.1	Extract Storage	Thomas Lally	05/06/21 18:20	Retrieve from Storage
JD24129-1.1.1	Thomas Lally	GCZZ	05/06/21 18:20	Load on Instrument
JD24129-1.2	Secured Storage	Dave Hunkele	05/04/21 13:43	Retrieve from Storage
JD24129-1.2	Dave Hunkele		05/04/21 13:43	Depleted
JD24129-1.3	Secured Storage	Dave Hunkele	05/04/21 13:43	Retrieve from Storage
JD24129-1.3	Dave Hunkele		05/04/21 13:43	Depleted
JD24129-1.4	Secured Storage	Dave Hunkele	05/04/21 13:41	Retrieve from Storage
JD24129-1.4	Dave Hunkele		05/04/21 13:42	Depleted
JD24129-2.1	Dave Hunkele	Secured Storage	05/04/21 13:45	Return to Storage
JD24129-2.1	Secured Storage	Manish Kewalramani	05/06/21 01:19	Retrieve from Storage
JD24129-2.1	Manish Kewalramani	Secured Staging Area	05/06/21 01:20	Return to Storage
JD24129-2.1	Secured Staging Area	Chatiyah Canaday	05/06/21 05:47	Retrieve from Storage
JD24129-2.1	Chatiyah Canaday	Secured Storage	05/06/21 13:56	Return to Storage
JD24129-2.1	Dominic Guerriero		06/07/21 07:27	Disposed
JD24129-2.1.1	Chatiyah Canaday	Organics Prep	05/06/21 06:01	Extract from JD24129-2.1
JD24129-2.1.1	Organics Prep	Taylor Cavanaugh	05/06/21 14:38	Extract from JD24129-2.1
JD24129-2.1.1	Taylor Cavanaugh	Extract Storage	05/06/21 14:38	Return to Storage
JD24129-2.1.1	Extract Storage	Thomas Lally	05/06/21 18:20	Retrieve from Storage
JD24129-2.1.1	Thomas Lally	GCZZ	05/06/21 18:20	Load on Instrument
JD24129-2.2	Secured Storage	Dave Hunkele	05/04/21 13:43	Retrieve from Storage
JD24129-2.2	Dave Hunkele		05/04/21 13:43	Depleted
JD24129-2.3	Secured Storage	Dave Hunkele	05/04/21 13:41	Retrieve from Storage
JD24129-2.3	Dave Hunkele		05/04/21 13:42	Depleted

**GC/LC Semi-volatiles****QC Data Summaries**

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**Includes the following where applicable:**

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

**Method Blank Summary**

Job Number: JD24129

Account: ESIFLL Earth Systems, Inc.

Project: Former Hess Port Reading Terminal Detention Basin, Port Reading, NJ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP33112-MB1	ZZ98919.D	1	05/06/21	TL	05/06/21	OP33112	GZZ3638

The QC reported here applies to the following samples:

Method: SW846-8015

JD24129-1, JD24129-2

CAS No.	Compound	Result	RL	Units	Q
	Gasoline (C4-C12)	NO MATCH			
	Turpentine (C9-C11)	NO MATCH			
	Mineral Spirits (C9-C12)	NO MATCH			
	Kerosene (C9-C18)	NO MATCH			
	Diesel /Fuel oil #2 (C9-C22)	NO MATCH			
	Fuel Oil #4 (C11-C24)	NO MATCH			
	Fuel Oil #6 (C11-C26)	NO MATCH			
	Other Patterns	NO MATCH			

**Initial Calibration Summary**

Job Number: JD24129

Sample: GZZ3628-ICC3628

Account: ESIFLL Earth Systems, Inc.

Lab FileID: ZZ98659.D

Project: Former Hess Port Reading Terminal Detention Basin, Port Reading, NJ

Response Factor Report HP G1530A

Method : C:\msdchem\1\METHODS\DROZZ3628.M (Chemstation Integrator)

Title : GCTPHS

Last Update : Sun Apr 18 13:08:08 2021

Response via : Initial Calibration

## Calibration Files

```
5000=zz98661.D 250 =zz98657.D 1000=zz98659.D 500 =zz98658.D
10k =zz98662.D 100 =zz98656.D 25 =zz98654.D 50k =zz98663.D
2500=zz98660.D 50 =zz98655.D      =      =
```

## Compound

	5000	250	1000	500	10k	100	25	50k	2500	50	Avg	%RSD
<hr/>												
1) TPH-DRO	1.328	1.451	1.356	1.408	1.255	1.466	1.506	1.305	1.330	1.428	1.383 E6	5.81
2) TPH-DRO (C10-C44)	1.328	1.451	1.356	1.408	1.255	1.466	1.506	1.305	1.330	1.428	1.383 E6	5.81
3) TPH-ORO (>C28-C40)	1.328	1.451	1.356	1.408	1.255	1.466	1.506	1.305	1.330	1.428	1.383 E6	5.81
4) TPH-DRO (C10-C20)	1.328	1.451	1.356	1.408	1.255	1.466	1.506	1.305	1.330	1.428	1.383 E6	5.81
5) TPH-ORO (C20-C34)	1.328	1.451	1.356	1.408	1.255	1.466	1.506	1.305	1.330	1.428	1.383 E6	5.81
6) o-TERPHENYL	1.640	1.752	1.644	1.714		1.740	1.633		1.614	1.660	1.675 E6	3.16
7) 5a-ANDROSTANE	1.541	1.629	1.536	1.586		1.635	1.538		1.523	1.565	1.569 E6	2.78
8) TETRACOSANE-d50									0.000	-1.00		

( # ) = Out of Range   ### Number of calibration levels exceeded format   ###

DROZZ3628.M                  Sun Apr 18 13:10:44 2021

**Initial Calibration Verification**

Job Number: JD24129

Sample: GZZ3628-ICV3628

Account: ESIFLL Earth Systems, Inc.

Lab FileID: ZZ98664.D

Project: Former Hess Port Reading Terminal Detention Basin, Port Reading, NJ

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\GZZ3628\zz98664.D Vial: 41  
 Acq On : 15 Apr 2021 8:44 pm Operator: thomasl  
 Sample : icv3628-1000 Inst : HP G1530A  
 Misc : op32742,gzz3628,10.0,,,1,1 Multiplr: 1.00  
 IntFile : autoint1.e

Method : C:\msdchem\1\METHODS\DROZZ3628.M (Chemstation Integrator)  
 Title : GCTPHS  
 Last Update : Sun Apr 18 13:08:08 2021  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT	Window
1	H TPH-DRO	1.383	1.245 E6	10.0	92	0.00	3.52-10.88	
2	H TPH-DRO (C10-C44)			-----	NA	-----		
3	H TPH-ORO (>C28-C40)			-----	NA	-----		
4	H TPH-DRO (C10-C20)			-----	NA	-----		
5	H TPH-ORO (C20-C34)			-----	NA	-----		
6	S o-TERPHENYL			-----	NA	-----		
7	S 5a-ANDROSTANE			-----	NA	-----		
8	S TETRACOSANE-d50			-----	NA	-----		

(#) = Out of Range  
 zz98659.D DROZZ3628.M

SPCC's out = 0 CCC's out = 0  
 Sun Apr 18 13:10:56 2021

**Continuing Calibration Summary**

Job Number: JD24129

Sample: GZZ3638-CC3628

Account: ESIFLL Earth Systems, Inc.

Lab FileID: ZZ98916.D

Project: Former Hess Port Reading Terminal Detention Basin, Port Reading, NJ

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\chrisc2\gzz3638\zz98916.d Vial: 4  
 Acq On : 06 May 2021 3:21 pm Operator: thomasl  
 Sample : cc3628-1000 Inst : HP G1530A  
 Misc : op33061,gzz3638,10.0,,,1,1 Multiplr: 1.00  
 IntFile : autoint1.e

Method : C:\msdchem\1\METHODS\drozz3628.m (ChemStation Integrator)  
 Title : GCTPHS  
 Last Update : Thu May 06 20:27:30 2021  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT	Window
1	H TPH-DRO	1.383	1.250 E6	9.6	92	0.00	3.52-	10.88
2	H TPH-DRO (C10-C44)		-----NA-----					
3	H TPH-ORO (>C28-C40)		-----NA-----					
4	H TPH-DRO (C10-C20)		-----NA-----					
5	H TPH-ORO (C20-C34)		-----NA-----					
6	S o-TERPHENYL	1.675	1.563 E6	6.7	95	0.00	8.16-	8.22
7	S 5a-ANDROSTANE	1.569	1.521 E6	3.1	99	0.00	8.60-	8.66
8	S TETRACOSANE-d50		-----NA-----					

(#) = Out of Range  
 zz98659.D drozz3628.m

SPCC's out = 0 CCC's out = 0  
 Thu May 06 20:33:32 2021

**Continuing Calibration Summary**

Job Number: JD24129

Sample: GZZ3638-CC3628

Account: ESIFLL Earth Systems, Inc.

Lab FileID: ZZ98925.D

Project: Former Hess Port Reading Terminal Detention Basin, Port Reading, NJ

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\chrisc2\gzz3638\zz98925.d Vial: 3  
 Acq On : 06 May 2021 9:47 pm Operator: thomasl  
 Sample : cc3628-500 Inst : HP G1530A  
 Misc : op33061,gzz3638,10.0,,,1,1 Multiplr: 1.00  
 IntFile : autoint1.e

Method : C:\msdchem\1\METHODS\drozz3628.m (ChemStation Integrator)  
 Title : GCTPHS  
 Last Update : Thu May 06 20:27:30 2021  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	RT	Window
1 H TPH-DRO	1.383	1.328 E6	4.0	94	0.00	3.52	-10.88
2 H TPH-DRO (C10-C44)		-----NA-----					
3 H TPH-ORO (>C28-C40)		-----NA-----					
4 H TPH-DRO (C10-C20)		-----NA-----					
5 H TPH-ORO (C20-C34)		-----NA-----					
6 S o-TERPHENYL	1.675	1.650 E6	1.5	96	0.00	8.16-	8.22
7 S 5a-ANDROSTANE	1.569	1.552 E6	1.1	98	0.00	8.60-	8.66
8 S TETRACOSANE-d50		-----NA-----					

(#) = Out of Range  
 zz98658.D drozz3628.m

SPCC's out = 0 CCC's out = 0  
 Thu May 06 23:44:57 2021

## Run Sequence Report

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Job Number: JD24129

Account: ESIFLL Earth Systems, Inc.

Project: Former Hess Port Reading Terminal Detention Basin, Port Reading, NJ

Run ID: GZZ3628	Method: SW846 8015D	Instrument ID: GCZZ
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Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
GZZ3628-RT	ZZ98653.D	04/15/21 14:33	n/a	Retention Time Marker
GZZ3628-IC3628	ZZ98654.D	04/15/21 15:07	n/a	Initial cal 25
GZZ3628-IC3628	ZZ98655.D	04/15/21 15:40	n/a	Initial cal 50
GZZ3628-IC3628	ZZ98656.D	04/15/21 16:14	n/a	Initial cal 100
GZZ3628-IC3628	ZZ98657.D	04/15/21 16:47	n/a	Initial cal 250
GZZ3628-IC3628	ZZ98658.D	04/15/21 17:21	n/a	Initial cal 500
GZZ3628-ICC3628	ZZ98659.D	04/15/21 17:55	n/a	Initial cal 1000
GZZ3628-IC3628	ZZ98660.D	04/15/21 18:29	n/a	Initial cal 2500
GZZ3628-IC3628	ZZ98661.D	04/15/21 19:03	n/a	Initial cal 5000
GZZ3628-IC3628	ZZ98662.D	04/15/21 19:37	n/a	Initial cal 10000
GZZ3628-IC3628	ZZ98663.D	04/15/21 20:10	n/a	Initial cal 50000
GZZ3628-ICV3628	ZZ98664.D	04/15/21 20:44	n/a	Initial cal verification 1000

6.3.1  
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# Run Sequence Report

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Job Number: JD24129

Account: ESIFLL Earth Systems, Inc.

Project: Former Hess Port Reading Terminal Detention Basin, Port Reading, NJ

Run ID:	GZZ3638	Method:	SW846 8015D	Instrument ID:	GCZZ
Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID	
GZZ3638-CC3628	ZZ98916.D	05/06/21 15:21	n/a	Continuing cal 1000	
GZZ3638-RT	ZZ98918.D	05/06/21 16:27	n/a	Retention Time Marker	
OP33112-MB1	ZZ98919.D	05/06/21 18:25	OP33112	Method Blank	
JD24129-1	ZZ98921.D	05/06/21 19:32	OP33112	FA-5	
JD24129-2	ZZ98923.D	05/06/21 20:39	OP33112	TF-2	
GZZ3638-CC3628	ZZ98925.D	05/06/21 21:47	n/a	Continuing cal 500	
OP33093-MB1	ZZ98927.D	05/06/21 22:54	OP33093	Method Blank	
OP33093-BS1	ZZ98928.D	05/06/21 23:28	OP33093	Blank Spike	
OP33093-BSD	ZZ98929.D	05/07/21 00:02	OP33093	Blank Spike Duplicate	
ZZZZZZ	ZZ98930.D	05/07/21 00:36	OP33093	(unrelated sample)	
ZZZZZZ	ZZ98931.D	05/07/21 01:09	OP33093	(unrelated sample)	
ZZZZZZ	ZZ98932.D	05/07/21 01:43	OP33093	(unrelated sample)	
ZZZZZZ	ZZ98933.D	05/07/21 02:16	OP33093	(unrelated sample)	
ZZZZZZ	ZZ98934.D	05/07/21 02:50	OP33093	(unrelated sample)	
ZZZZZZ	ZZ98935.D	05/07/21 03:23	OP33093	(unrelated sample)	
GZZ3638-CC3628	ZZ98936.D	05/07/21 03:56	n/a	Continuing cal 1000	
ZZZZZZ	ZZ98938.D	05/07/21 05:03	OP33093	(unrelated sample)	
ZZZZZZ	ZZ98939.D	05/07/21 05:36	OP33093	(unrelated sample)	
ZZZZZZ	ZZ98940.D	05/07/21 06:10	OP33093	(unrelated sample)	
ZZZZZZ	ZZ98941.D	05/07/21 06:43	OP33093	(unrelated sample)	
ZZZZZZ	ZZ98942.D	05/07/21 07:16	OP33093	(unrelated sample)	
GZZ3638-CC3628	ZZ98943.D	05/07/21 07:49	n/a	Continuing cal 500	

6.3.2  
6

**GC/LC Semi-volatiles****Raw Data**

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## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\chrisc2\gzz3638\  
 Data File : zz98921.d  
 Signal(s) : FID2B.CH  
 Acq On : 06 May 2021 7:32 pm  
 Operator : thomasl  
 Sample : jd24129-1  
 Misc : op33112,gzz3638,1.0,,,10,10  
 ALS Vial : 73 Sample Multiplier: 1

Integration File: autoint1.e  
 Quant Time: May 06 23:37:01 2021  
 Quant Method : C:\msdchem\1\METHODS\drozz3628.m  
 Quant Title : GCTPHS  
 QLast Update : Thu May 06 20:27:30 2021  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1 ul  
 Signal Phase : ZB-5  
 Signal Info : .25 mm ID

Compound	R.T.	Response	Conc	Units
<hr/>				
System Monitoring Compounds				
6) S o-TERPHENYL	8.179	14279990	8.527	PPM m
Spiked Amount 50.000		Recovery =	17.05%	
7) S 5a-ANDROSTANE	8.639	9250479	5.895	PPM
Spiked Amount 50.000		Recovery =	11.79%	
<hr/>				
Target Compounds				
1) H TPH-DRO	7.200	7862155899	5683.148	PPM
2) H TPH-DRO (C10-C44)	10.360	9718775263	7025.202	ppm
<hr/>				

(f)=RT Delta &gt; 1/2 Window

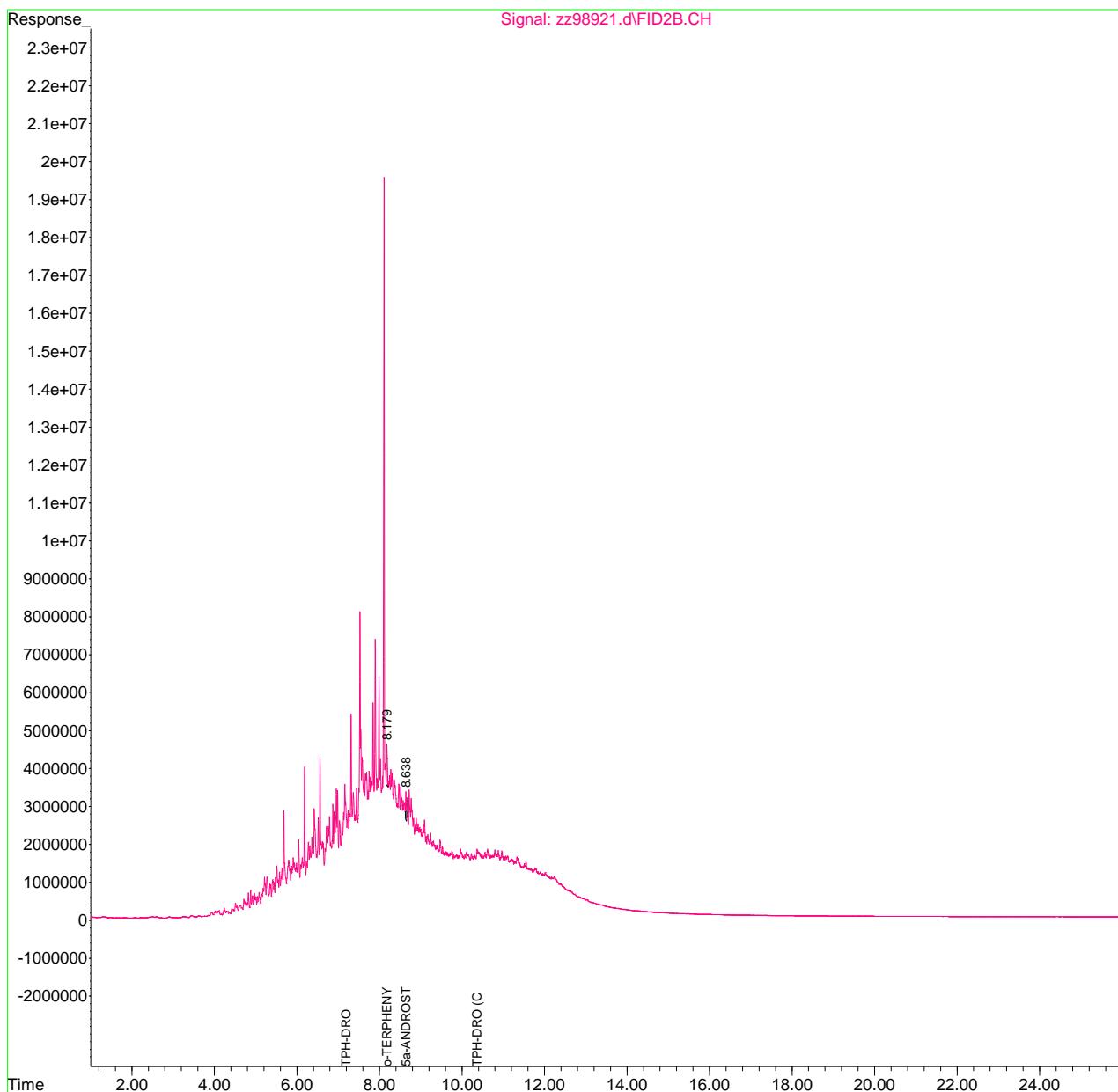
(m)=manual int.

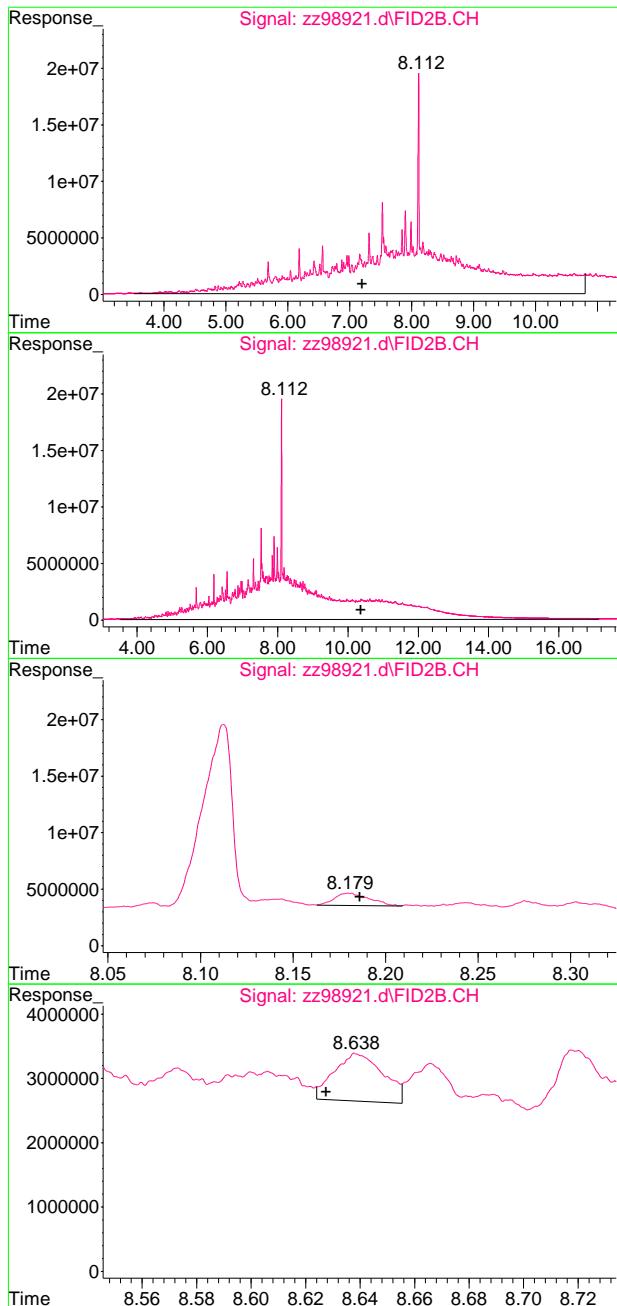
## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\chrisc2\gzz3638\  
 Data File : zz98921.d  
 Signal(s) : FID2B.CH  
 Acq On : 06 May 2021 7:32 pm  
 Operator : thomasl  
 Sample : jd24129-1  
 Misc : op33112,gzz3638,1.0,,,10,10  
 ALS Vial : 73 Sample Multiplier: 1

Integration File: autoint1.e  
 Quant Time: May 06 23:37:01 2021  
 Quant Method : C:\msdchem\1\METHODS\drozz3628.m  
 Quant Title : GCTPHS  
 QLast Update : Thu May 06 20:27:30 2021  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1 ul  
 Signal Phase : ZB-5  
 Signal Info : .25 mm ID





#1 TPH-DRO

R.T.: 7.200 min  
Delta R.T.: 0.000 min  
Response: 7862155899  
Conc: 5683.15 PPM

#2 TPH-DRO (C10-C44)

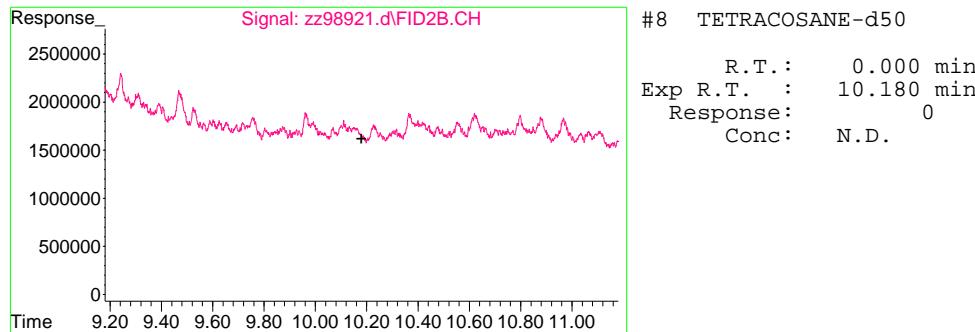
R.T.: 10.360 min  
Delta R.T.: 0.000 min  
Response: 9718775263  
Conc: 7025.20 ppm

#6 o-TERPHENYL

R.T.: 8.179 min  
Delta R.T.: -0.007 min  
Response: 14279990  
Conc: 8.53 PPM m

#7 5a-ANDROSTANE

R.T.: 8.639 min  
Delta R.T.: 0.012 min  
Response: 9250479  
Conc: 5.89 PPM



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\chrisc2\gzz3638\  
 Data File : zz98923.d  
 Signal(s) : FID2B.CH  
 Acq On : 06 May 2021 8:39 pm  
 Operator : thomasl  
 Sample : jd24129-2  
 Misc : op33112,gzz3638,1.0,,,10,10  
 ALS Vial : 75 Sample Multiplier: 1

Integration File: autoint1.e  
 Quant Time: May 06 23:42:21 2021  
 Quant Method : C:\msdchem\1\METHODS\drozz3628.m  
 Quant Title : GCTPHS  
 QLast Update : Thu May 06 20:27:30 2021  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1 ul  
 Signal Phase : ZB-5  
 Signal Info : .25 mm ID

Compound	R.T.	Response	Conc	Units
<hr/>				
System Monitoring Compounds				
6) S o-TERPHENYL	8.178	20292231	12.117	PPM m
Spiked Amount 50.000		Recovery =	24.23%	
7) S 5a-ANDROSTANE	8.639	6390346	4.072	PPM m
Spiked Amount 50.000		Recovery =	8.14%	
<hr/>				
Target Compounds				
1) H TPH-DRO	7.200	8483686761	6132.420	PPM
2) H TPH-DRO (C10-C44)	10.360	10369619189	7495.664	ppm
<hr/>				

(f)=RT Delta &gt; 1/2 Window

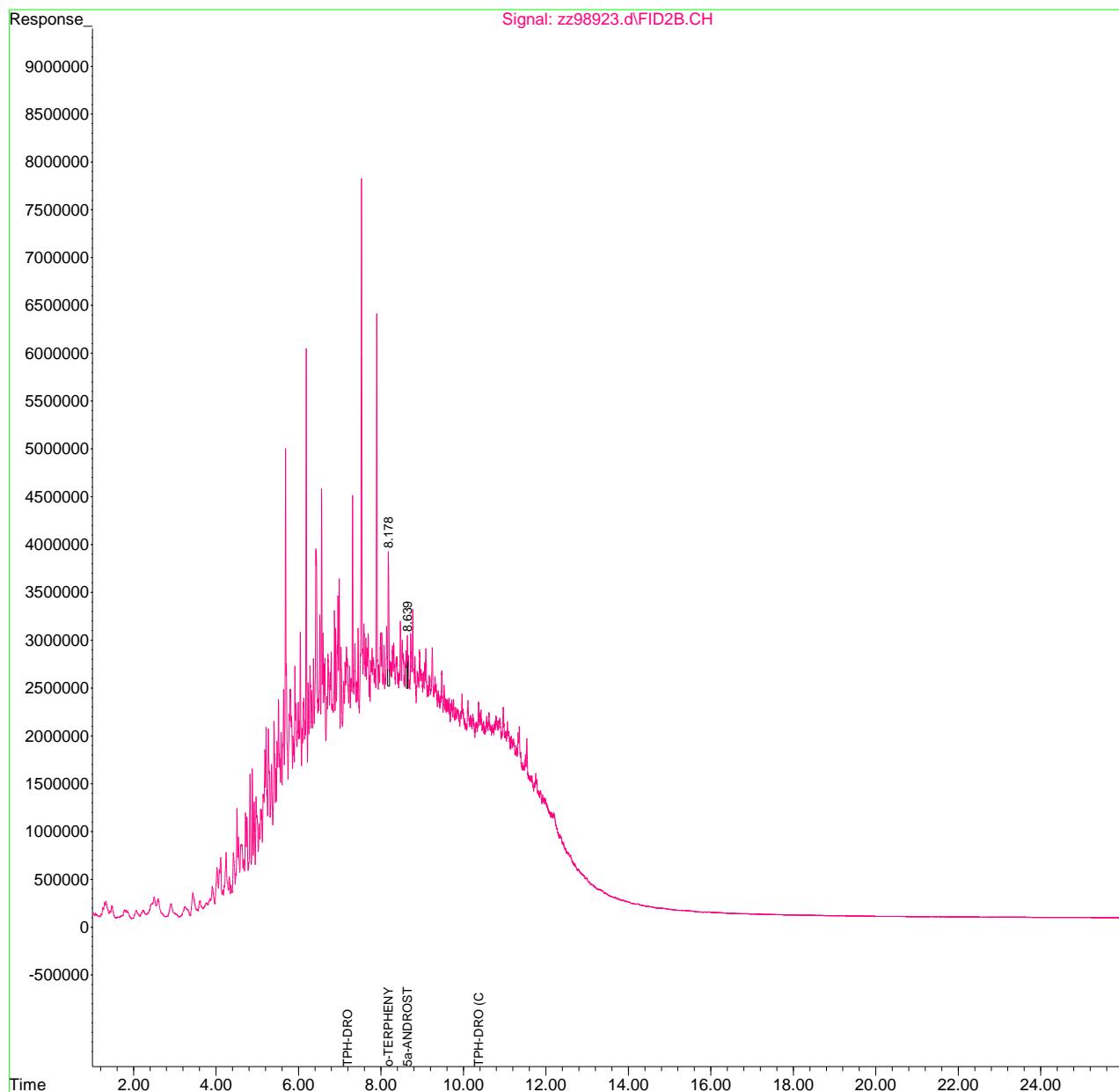
(m)=manual int.

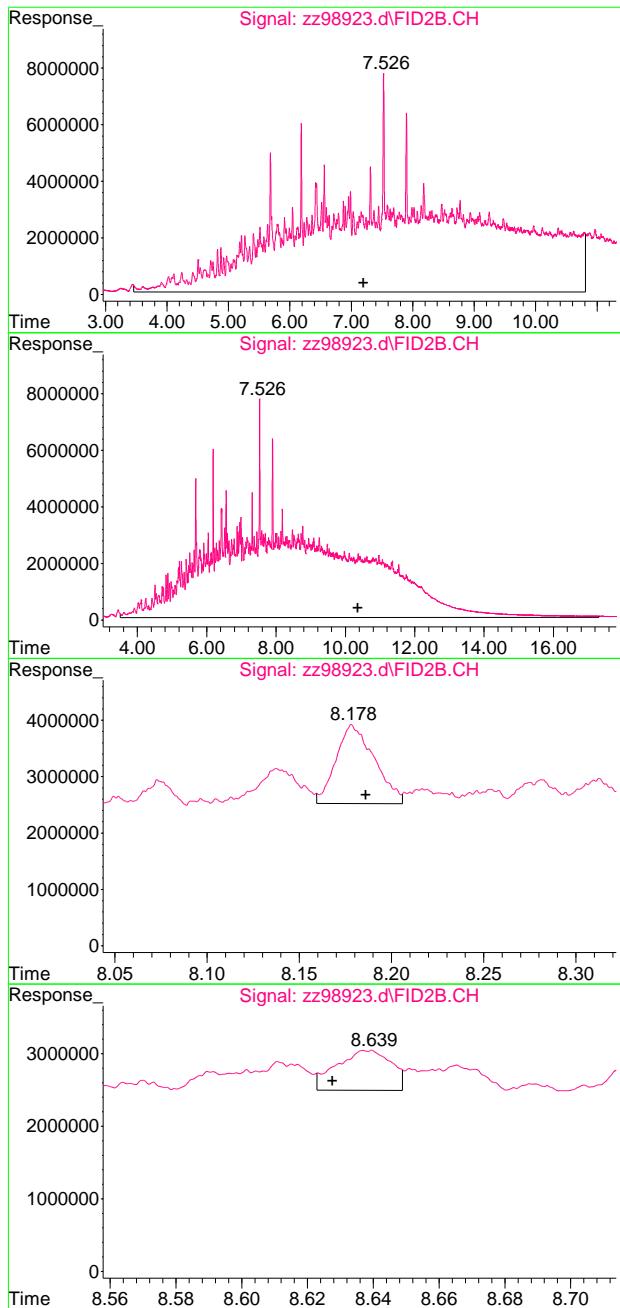
## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\chrisc2\gzz3638\  
 Data File : zz98923.d  
 Signal(s) : FID2B.CH  
 Acq On : 06 May 2021 8:39 pm  
 Operator : thomasl  
 Sample : jd24129-2  
 Misc : op33112,gzz3638,1.0,,,10,10  
 ALS Vial : 75 Sample Multiplier: 1

Integration File: autoint1.e  
 Quant Time: May 06 23:42:21 2021  
 Quant Method : C:\msdchem\1\METHODS\drozz3628.m  
 Quant Title : GCTPHS  
 QLast Update : Thu May 06 20:27:30 2021  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1 ul  
 Signal Phase : ZB-5  
 Signal Info : .25 mm ID





#1 TPH-DRO

R.T.: 7.200 min  
Delta R.T.: 0.000 min  
Response: 8483686761  
Conc: 6132.42 PPM

#2 TPH-DRO (C10-C44)

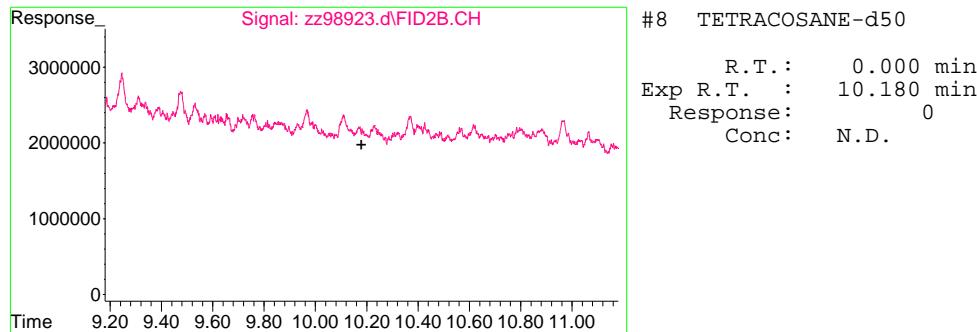
R.T.: 10.360 min  
Delta R.T.: 0.000 min  
Response: 10369619189  
Conc: 7495.66 ppm

#6 o-TERPHENYL

R.T.: 8.178 min  
Delta R.T.: -0.008 min  
Response: 20292231  
Conc: 12.12 PPM m

#7 5a-ANDROSTANE

R.T.: 8.639 min  
Delta R.T.: 0.012 min  
Response: 6390346  
Conc: 4.07 PPM m

7.1.2  
7

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\chrisc2\gzz3638\  
 Data File : zz98919.d  
 Signal(s) : FID2B.CH  
 Acq On : 06 May 2021 6:25 pm  
 Operator : thomas1  
 Sample : op33112-mb1  
 Misc : op33112,gzz3638,1.0,,,10,1  
 ALS Vial : 71 Sample Multiplier: 1

Integration File: autoint1.e  
 Quant Time: May 06 20:31:20 2021  
 Quant Method : C:\msdchem\1\METHODS\drozz3628.m  
 Quant Title : GCTPHS  
 QLast Update : Thu May 06 20:27:30 2021  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1 ul  
 Signal Phase : ZB-5  
 Signal Info : .25 mm ID

Compound	R.T.	Response	Conc	Units
<hr/>				
System Monitoring Compounds				
6) S o-TERPHENYL	8.189	29346266	17.523	PPM
Spiked Amount 50.000		Recovery =	35.05%	
7) S 5a-ANDROSTANE	8.630	30649635	19.532	PPM
Spiked Amount 50.000		Recovery =	39.06%	
<hr/>				
Target Compounds				
<hr/>				

(f)=RT Delta &gt; 1/2 Window

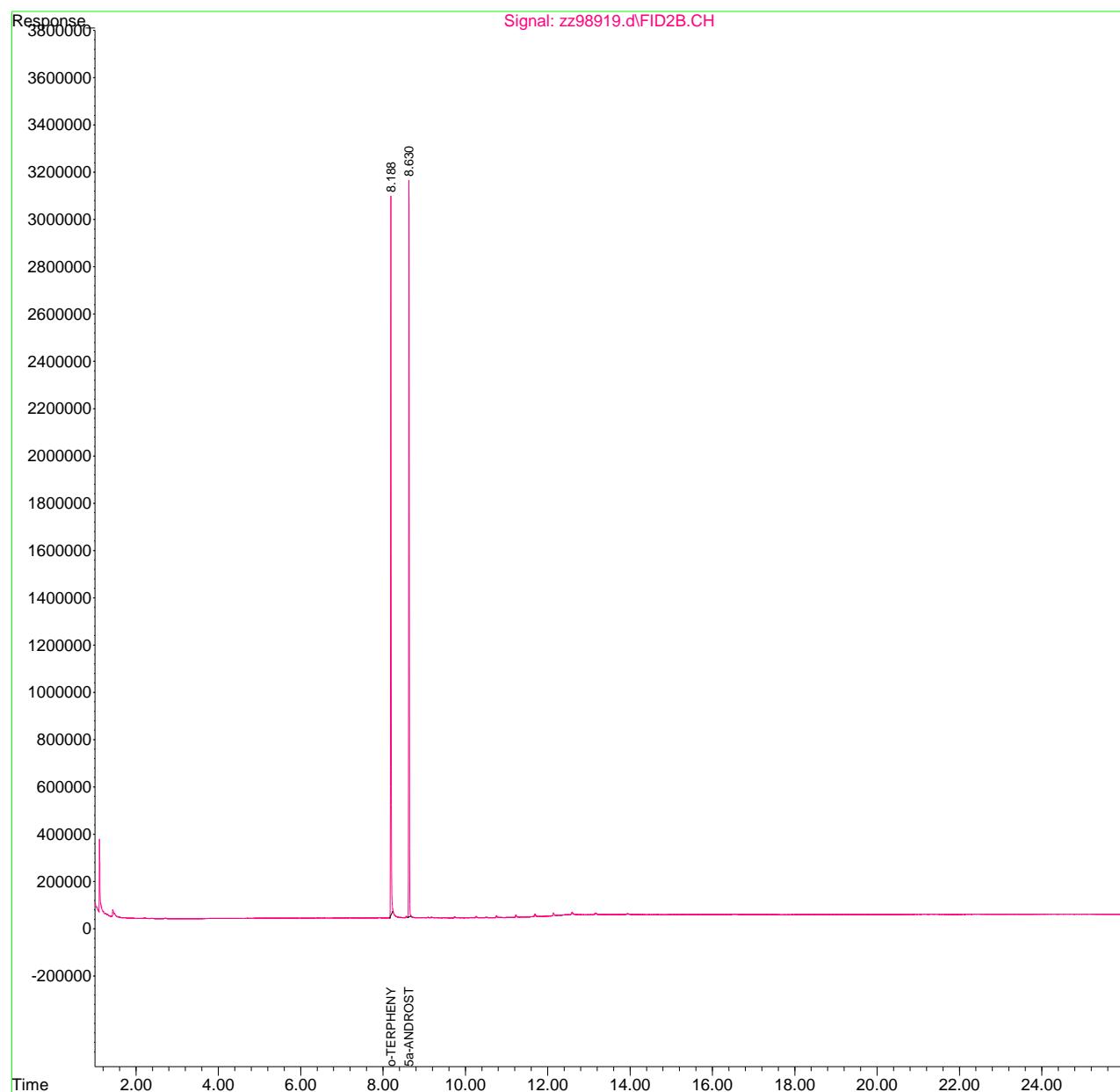
(m)=manual int.

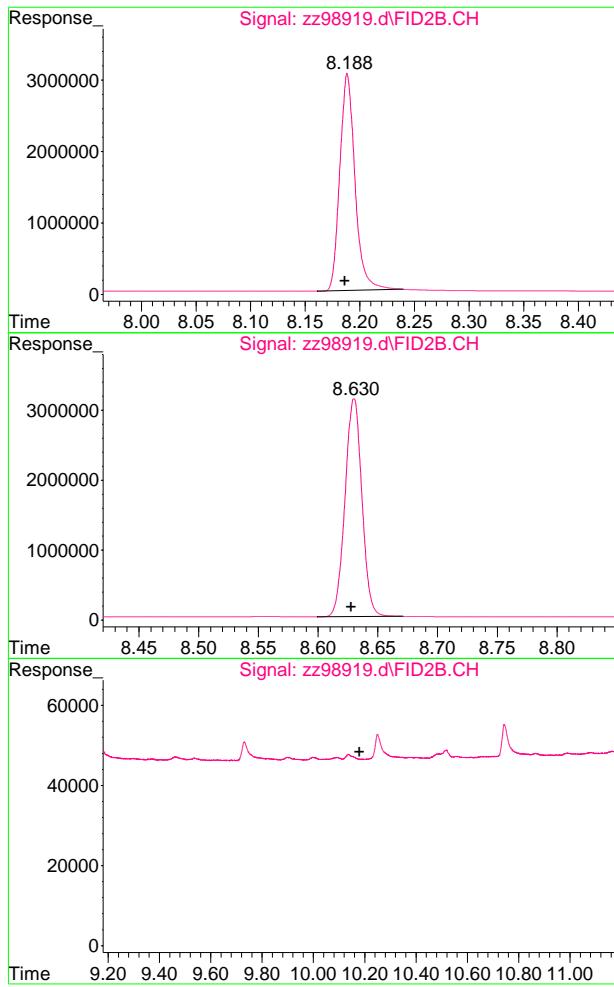
## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\chrisc2\gzz3638\  
 Data File : zz98919.d  
 Signal(s) : FID2B.CH  
 Acq On : 06 May 2021 6:25 pm  
 Operator : thomasl  
 Sample : op33112-mb1  
 Misc : op33112,gzz3638,1.0,,,10,1  
 ALS Vial : 71 Sample Multiplier: 1

Integration File: autoint1.e  
 Quant Time: May 06 20:31:20 2021  
 Quant Method : C:\msdchem\1\METHODS\drozz3628.m  
 Quant Title : GCTPHS  
 QLast Update : Thu May 06 20:27:30 2021  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1 ul  
 Signal Phase : ZB-5  
 Signal Info : .25 mm ID





## #6 o-TERPHENYL

R.T.: 8.189 min  
 Delta R.T.: 0.003 min  
 Response: 29346266  
 Conc: 17.52 PPM

## #7 5a-ANDROSTANE

R.T.: 8.630 min  
 Delta R.T.: 0.003 min  
 Response: 30649635  
 Conc: 19.53 PPM

## #8 TETRACOSANE-d50

R.T.: 0.000 min  
 Exp R.T. : 10.180 min  
 Response: 0  
 Conc: N.D.

## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\syrap\gzz3634\  
Data File : zz98797.d

Signal(s) : FID2B.CH

Acq On : 26 Apr 2021 1:35 pm

Operator : thomasl

Sample : ref #2 diesel

Misc : op32938,gzz3634,1.0,,,1,1

ALS Vial : 6 Sample Multiplier: 1

Integration File: autoint1.e

Quant Time: Apr 26 23:32:45 2021

Quant Method : C:\MSDCHEM\1\METHODS\drozz3628.m

Quant Title : GCTPHS

QLast Update : Fri Apr 23 05:30:12 2021

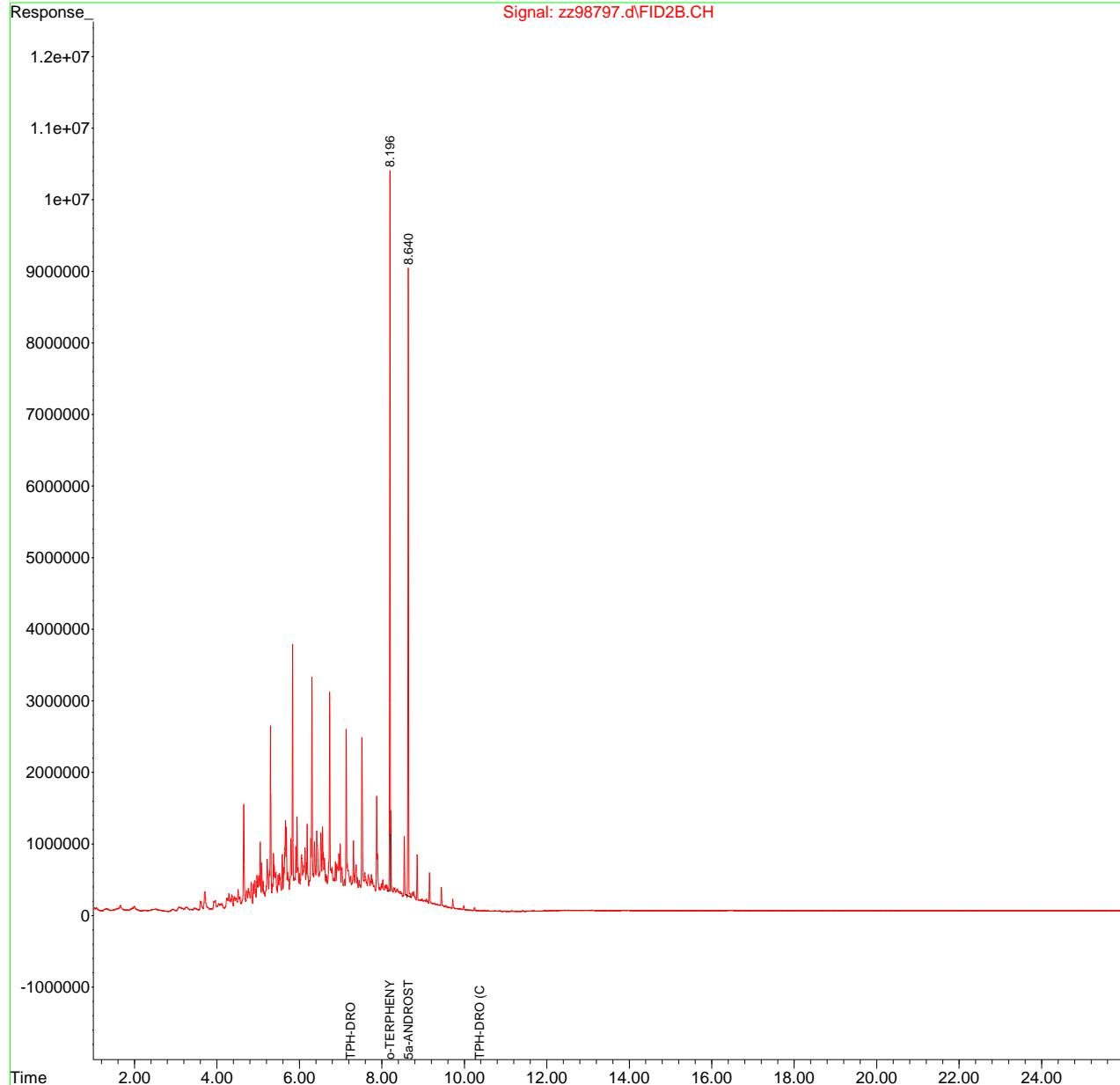
Response via : Initial Calibration

Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1 ul

Signal Phase : ZB-5

Signal Info : .25 mm ID



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\syrap\gzz3634\  
 Data File : zz98798.d

Signal(s) : FID2B.CH

Acq On : 26 Apr 2021 2:09 pm

Operator : thomasl

Sample : ref #2 fuel oil

Misc : op32938,gzz3634,1.0,,,1,1

ALS Vial : 7 Sample Multiplier: 1

Integration File: autoint1.e

Quant Time: Apr 26 23:34:26 2021

Quant Method : C:\MSDCHEM\1\METHODS\drozz3628.m

Quant Title : GCTPHS

QLast Update : Fri Apr 23 05:30:12 2021

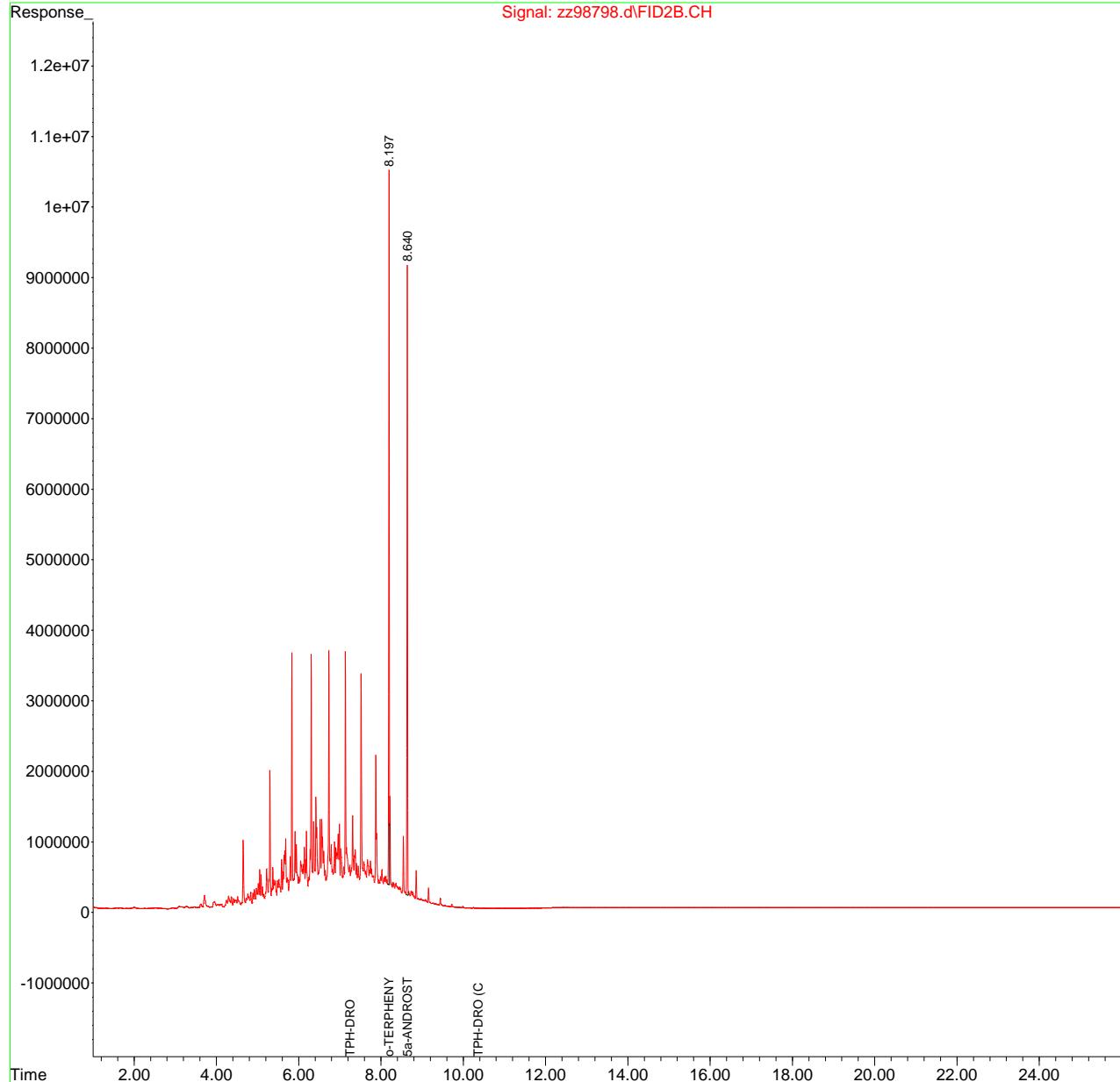
Response via : Initial Calibration

Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1 ul

Signal Phase : ZB-5

Signal Info : .25 mm ID



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\syrap\gzz3634\  
 Data File : zz98799.d

Signal(s) : FID2B.CH

Acq On : 26 Apr 2021 2:42 pm

Operator : thomasl

Sample : ref #4 fuel oil

Misc : op32938,gzz3634,1.0,,,1,1

ALS Vial : 8 Sample Multiplier: 1

Integration File: autoint1.e

Quant Time: Apr 26 23:36:33 2021

Quant Method : C:\MSDCHEM\1\METHODS\drozz3628.m

Quant Title : GCTPHS

QLast Update : Fri Apr 23 05:30:12 2021

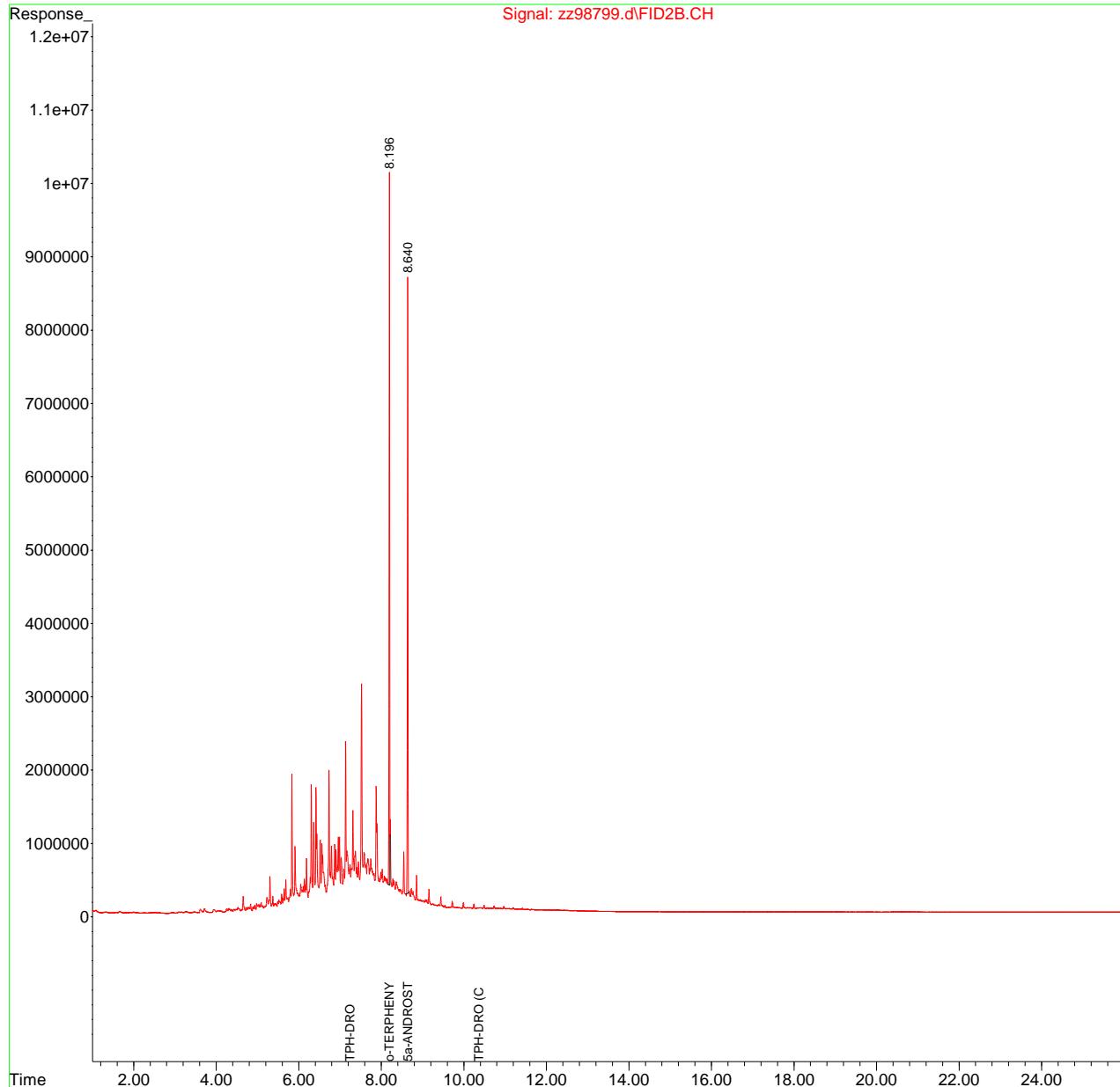
Response via : Initial Calibration

Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1 ul

Signal Phase : ZB-5

Signal Info : .25 mm ID

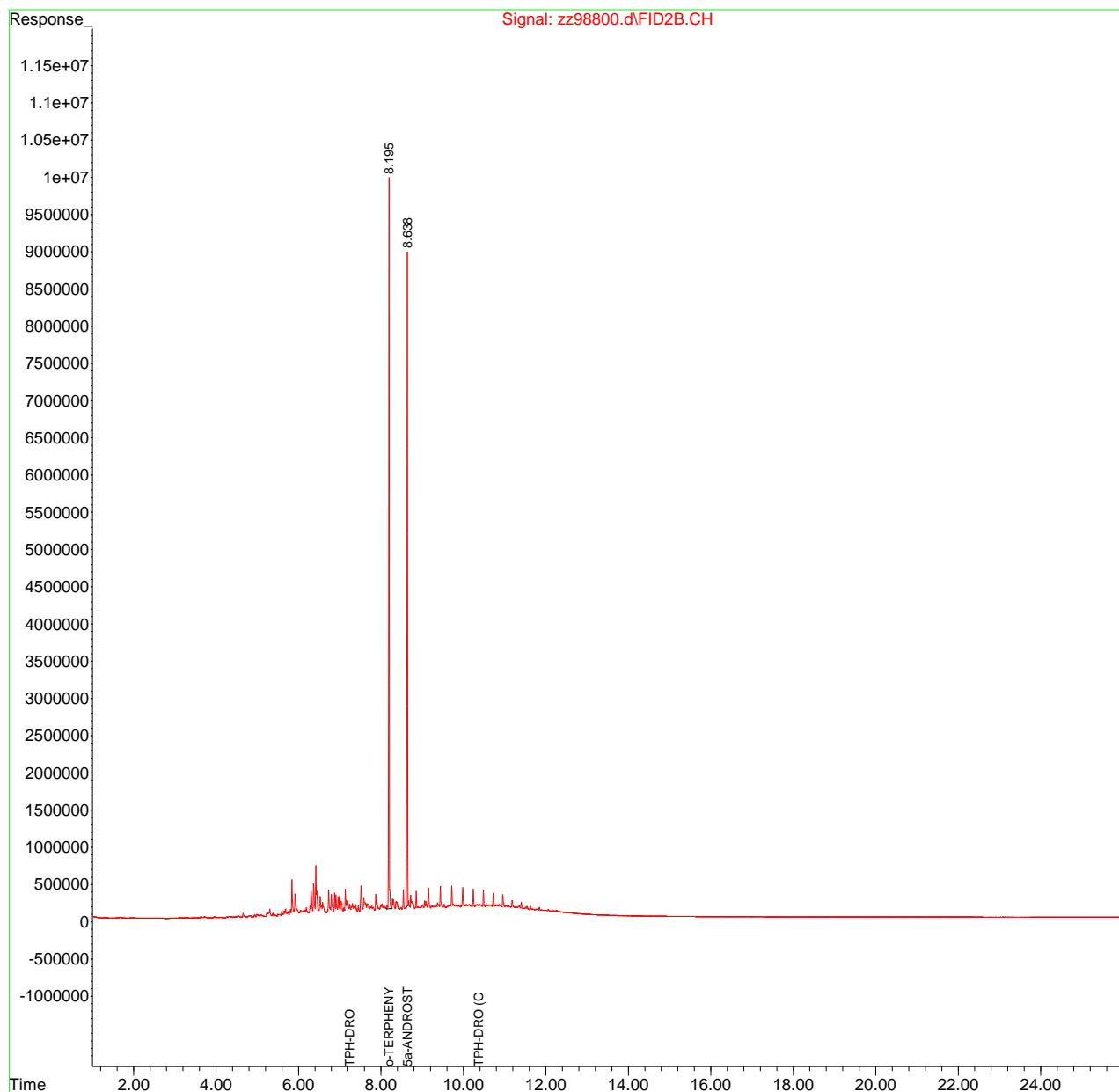


## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\syrap\gzz3634\  
 Data File : zz98800.d  
 Signal(s) : FID2B.CH  
 Acq On : 26 Apr 2021 3:15 pm  
 Operator : thomasl  
 Sample : ref #6 fuel oil  
 Misc : op32938,gzz3634,1.0,,,1,1  
 ALS Vial : 9 Sample Multiplier: 1

Integration File: autoint1.e  
 Quant Time: Apr 26 23:37:40 2021  
 Quant Method : C:\MSDCHEM\1\METHODS\drozz3628.m  
 Quant Title : GCTPHS  
 QLast Update : Fri Apr 23 05:30:12 2021  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1 ul  
 Signal Phase : ZB-5  
 Signal Info : .25 mm ID



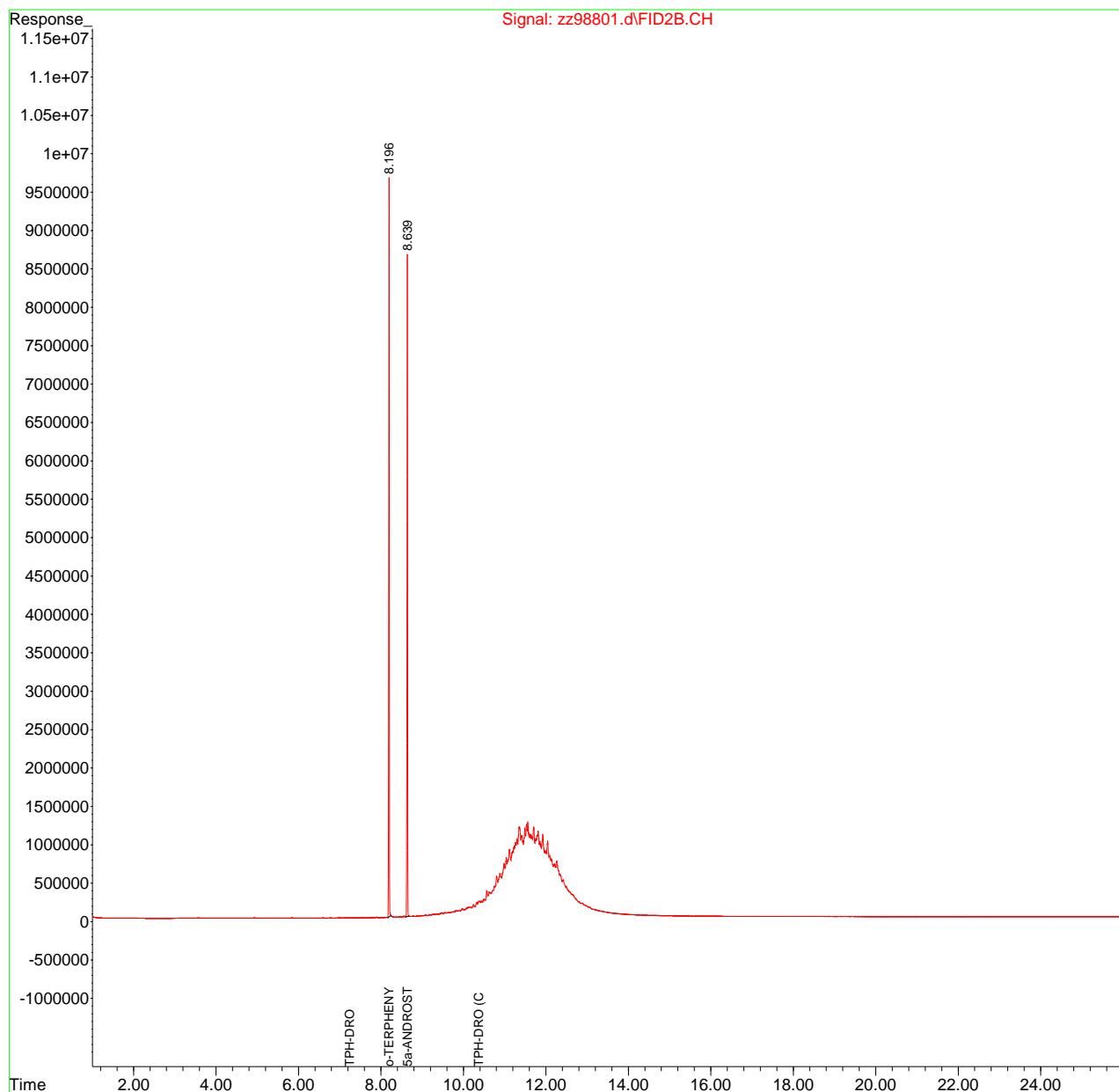
## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\syrap\gzz3634\  
Data File : zz98801.d

Signal(s) : FID2B.CH  
Acq On : 26 Apr 2021 3:48 pm  
Operator : thomasl  
Sample : ref 30w motor oil  
Misc : op32938,gzz3634,1.0,,,1,1  
ALS Vial : 10 Sample Multiplier: 1

Integration File: autoint1.e  
Quant Time: Apr 26 23:39:53 2021  
Quant Method : C:\MSDCHEM\1\METHODS\drozz3628.m  
Quant Title : GCTPHS  
QLast Update : Fri Apr 23 05:30:12 2021  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1 ul  
Signal Phase : ZB-5  
Signal Info : .25 mm ID



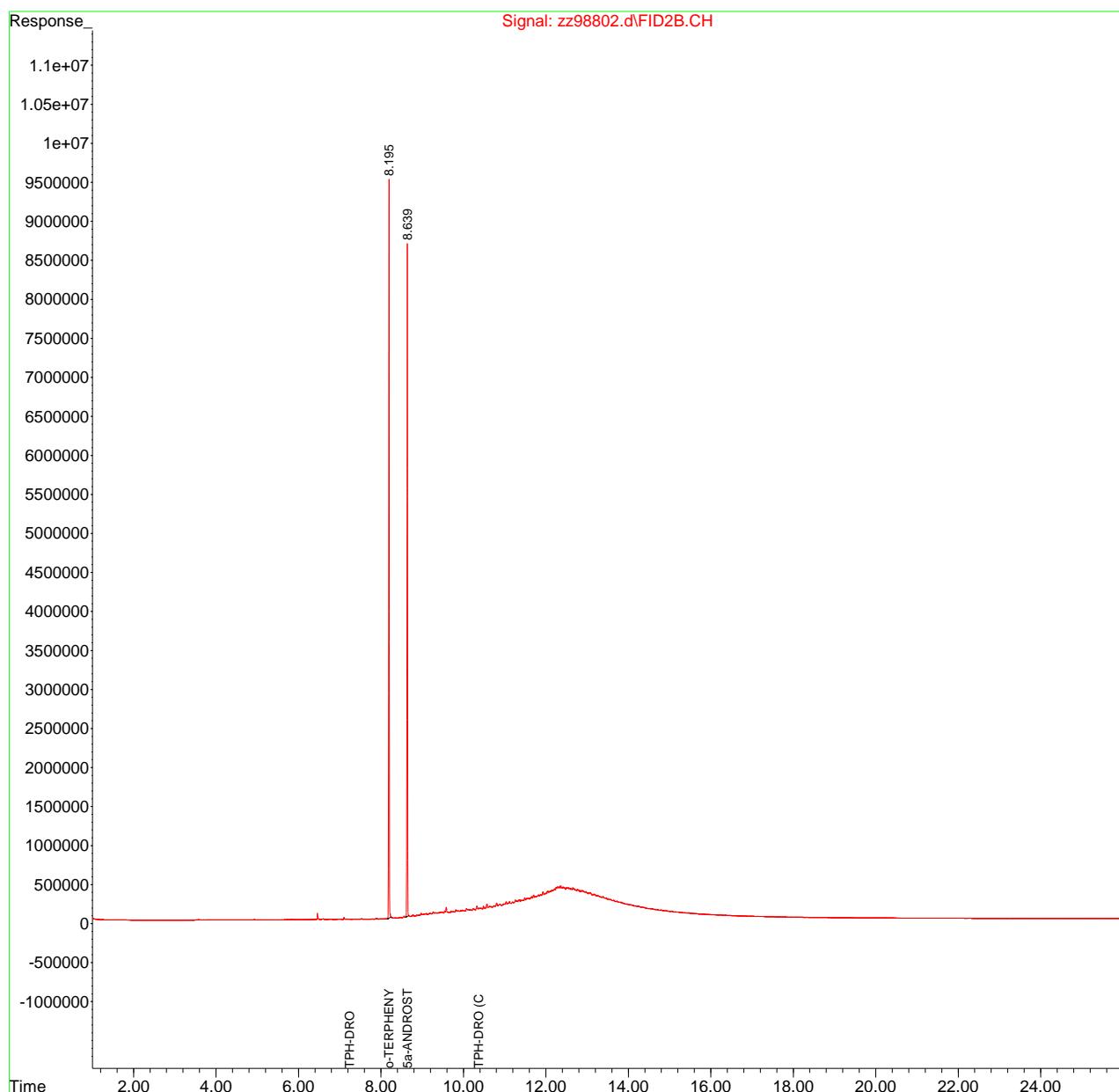
## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\syrap\gzz3634\  
Data File : zz98802.d

Signal(s) : FID2B.CH  
Acq On : 26 Apr 2021 4:22 pm  
Operator : thomasl  
Sample : ref 40w motor oil  
Misc : op32938,gzz3634,1.0,,,1,1  
ALS Vial : 11 Sample Multiplier: 1

Integration File: autoint1.e  
Quant Time: Apr 26 23:40:45 2021  
Quant Method : C:\MSDCHEM\1\METHODS\drozz3628.m  
Quant Title : GCTPHS  
QLast Update : Fri Apr 23 05:30:12 2021  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1 ul  
Signal Phase : ZB-5  
Signal Info : .25 mm ID

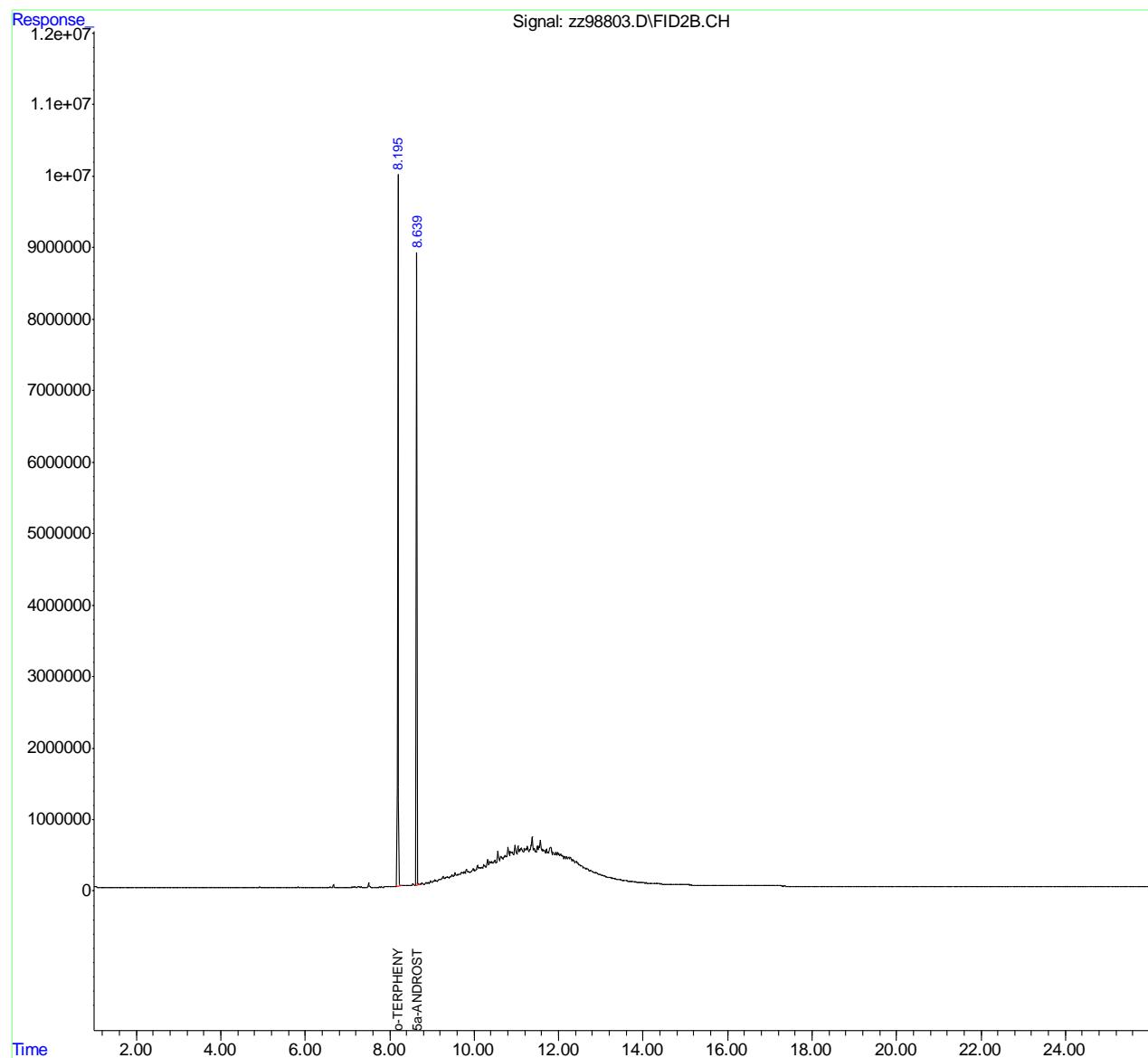


## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GZZ3634\  
Data File : zz98803.D  
Signal(s) : FID2B.CH  
Acq On : 26 Apr 2021 4:55 pm  
Operator : thomasl  
Sample : ref 50w motor oil  
Misc : op32938,gzz3634,1.0,,,1,1  
ALS Vial : 12 Sample Multiplier: 1

Integration File: autoint1.e  
Quant Time: May 07 15:31:48 2021  
Quant Method : C:\MSDCHEM\1\METHODS\DROZZ3628.M  
Quant Title : GCTPHS  
QLast Update : Sun Apr 18 13:08:08 2021  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1 ul  
Signal Phase : ZB-5  
Signal Info : .25 mm ID



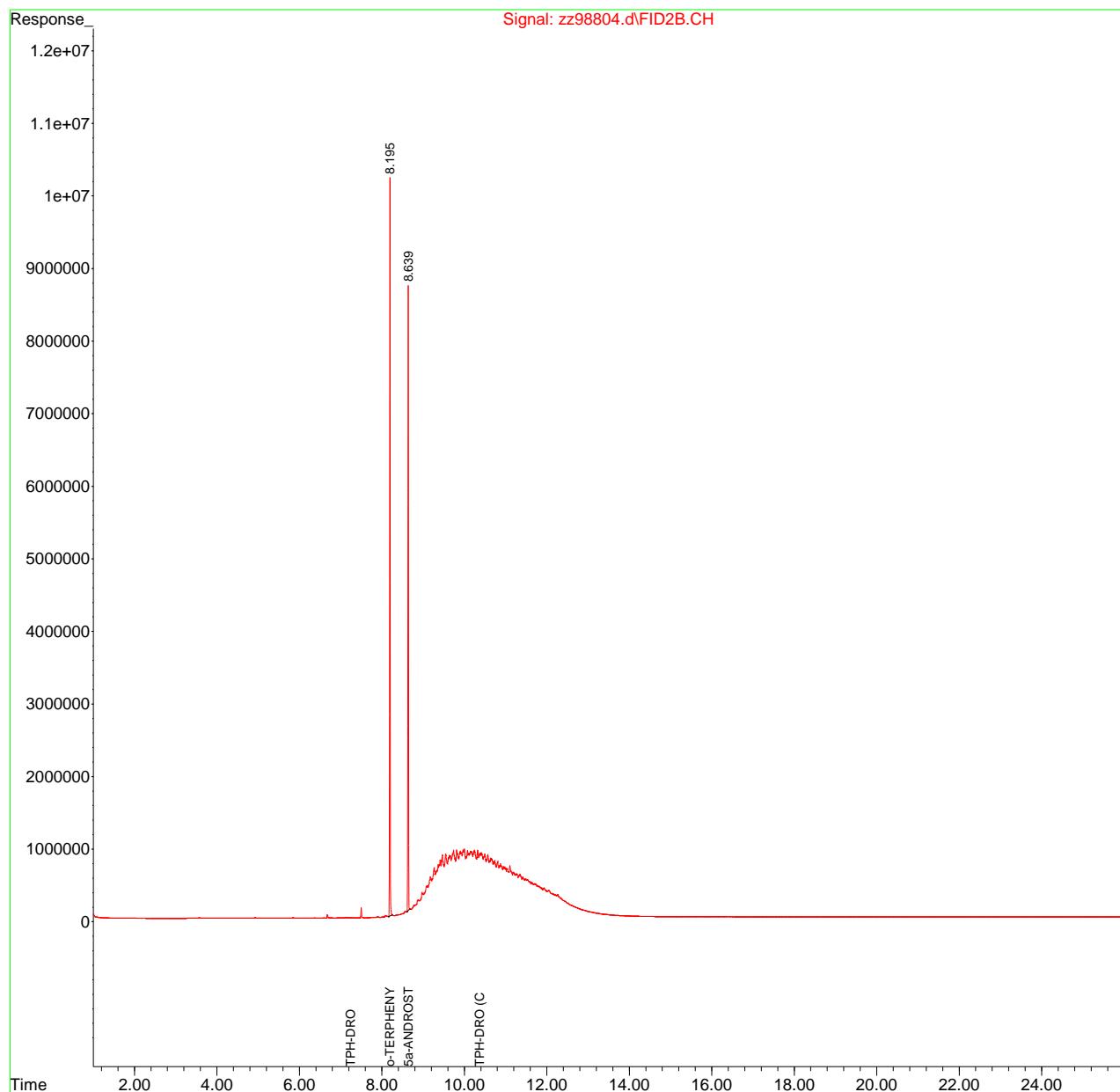
## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\syrap\gzz3634\  
Data File : zz98804.d

Signal(s) : FID2B.CH  
Acq On : 26 Apr 2021 5:29 pm  
Operator : thomasl  
Sample : ref 10w30  
Misc : op32938,gzz3634,1.0,,,1,1  
ALS Vial : 13 Sample Multiplier: 1

Integration File: autoint1.e  
Quant Time: Apr 26 23:41:53 2021  
Quant Method : C:\MSDCHEM\1\METHODS\drozz3628.m  
Quant Title : GCTPHS  
QLast Update : Fri Apr 23 05:30:12 2021  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1 ul  
Signal Phase : ZB-5  
Signal Info : .25 mm ID



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\syrap\gzz3634\  
 Data File : zz98805.d

Signal(s) : FID2B.CH

Acq On : 26 Apr 2021 6:02 pm

Operator : thomasl

Sample : ref jp-4 jet fuel

Misc : op32938,gzz3634,1.0,,,1,1

ALS Vial : 14 Sample Multiplier: 1

Integration File: autoint1.e

Quant Time: Apr 26 23:43:43 2021

Quant Method : C:\MSDCHEM\1\METHODS\drozz3628.m

Quant Title : GCTPHS

QLast Update : Fri Apr 23 05:30:12 2021

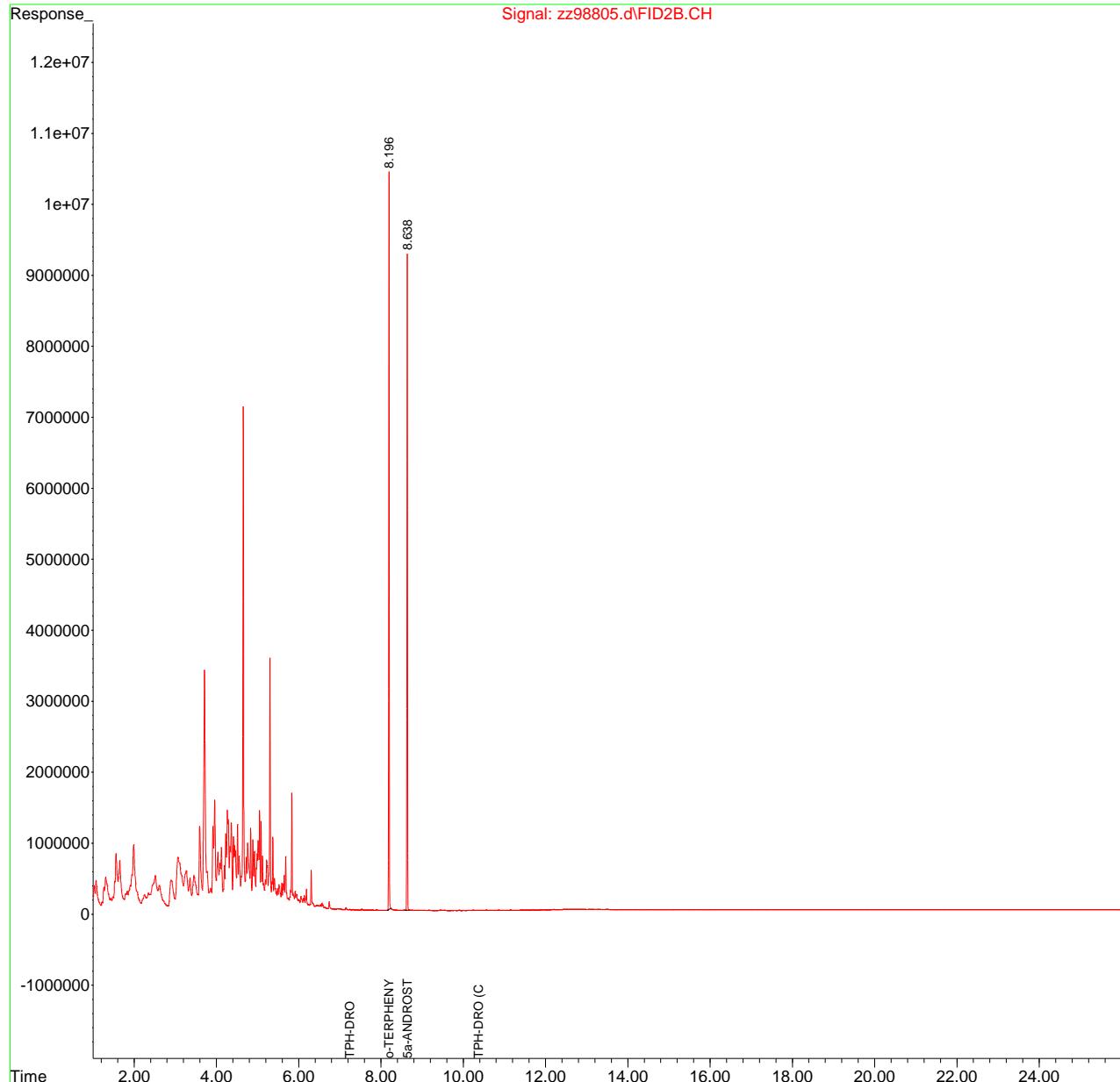
Response via : Initial Calibration

Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1 ul

Signal Phase : ZB-5

Signal Info : .25 mm ID

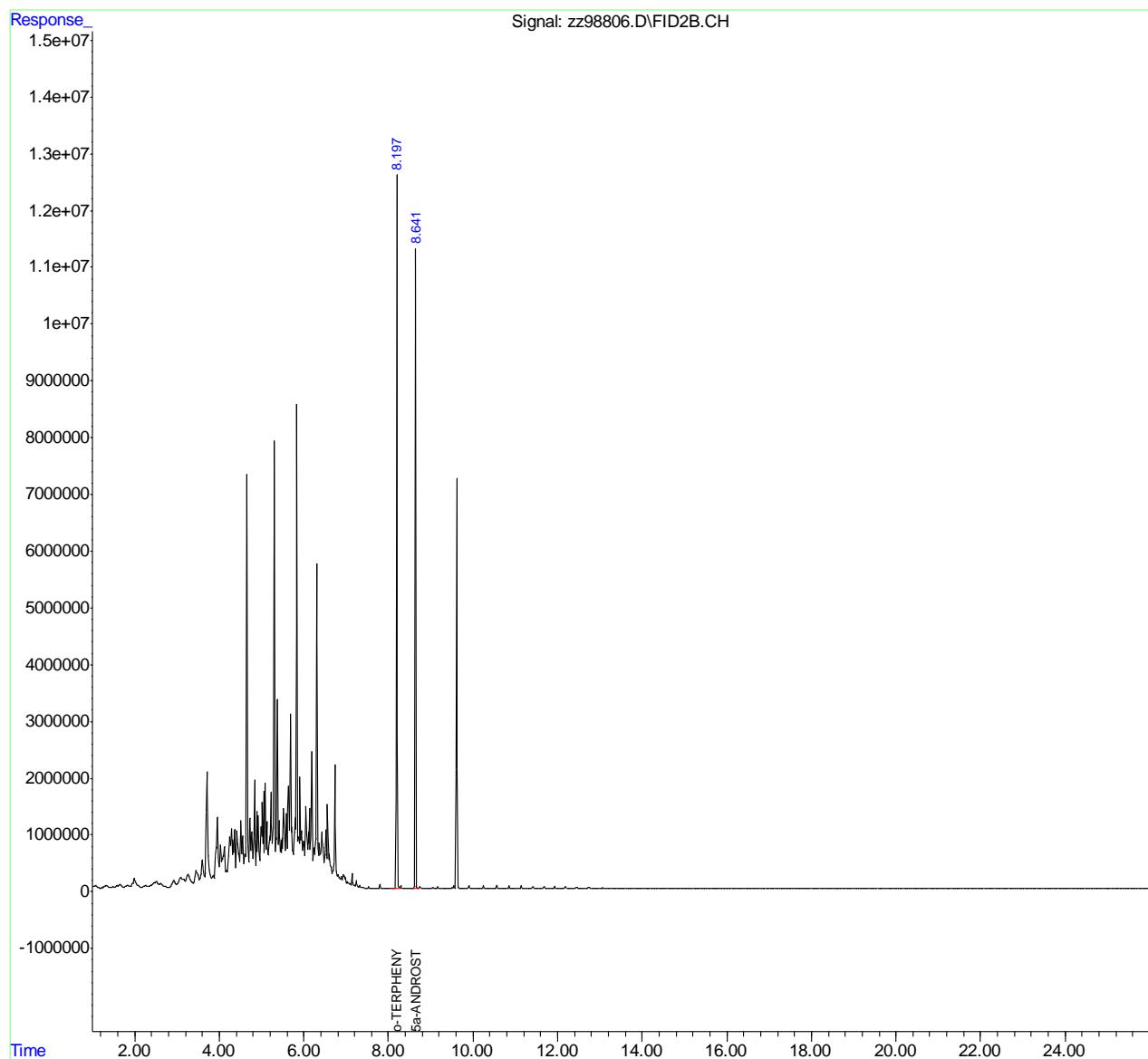


## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GZZ3634\  
 Data File : zz98806.D  
 Signal(s) : FID2B.CH  
 Acq On : 26 Apr 2021 6:35 pm  
 Operator : thomasl  
 Sample : ref jp-5 jet fuel  
 Misc : op32938,gzz3634,1.0,,,1,1  
 ALS Vial : 15 Sample Multiplier: 1

Integration File: autoint1.e  
 Quant Time: May 07 15:32:07 2021  
 Quant Method : C:\MSDCHEM\1\METHODS\DROZZ3628.M  
 Quant Title : GCTPHS  
 QLast Update : Sun Apr 18 13:08:08 2021  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1 ul  
 Signal Phase : ZB-5  
 Signal Info : .25 mm ID



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\syrap\gzz3634\  
 Data File : zz98807.d

Signal(s) : FID2B.CH

Acq On : 26 Apr 2021 7:08 pm

Operator : thomasl

Sample : ref jp-8 jet fuel

Misc : op32938,gzz3634,1.0,,,1,1

ALS Vial : 16 Sample Multiplier: 1

Integration File: autoint1.e

Quant Time: Apr 26 23:46:58 2021

Quant Method : C:\MSDCHEM\1\METHODS\drozz3628.m

Quant Title : GCTPHS

QLast Update : Fri Apr 23 05:30:12 2021

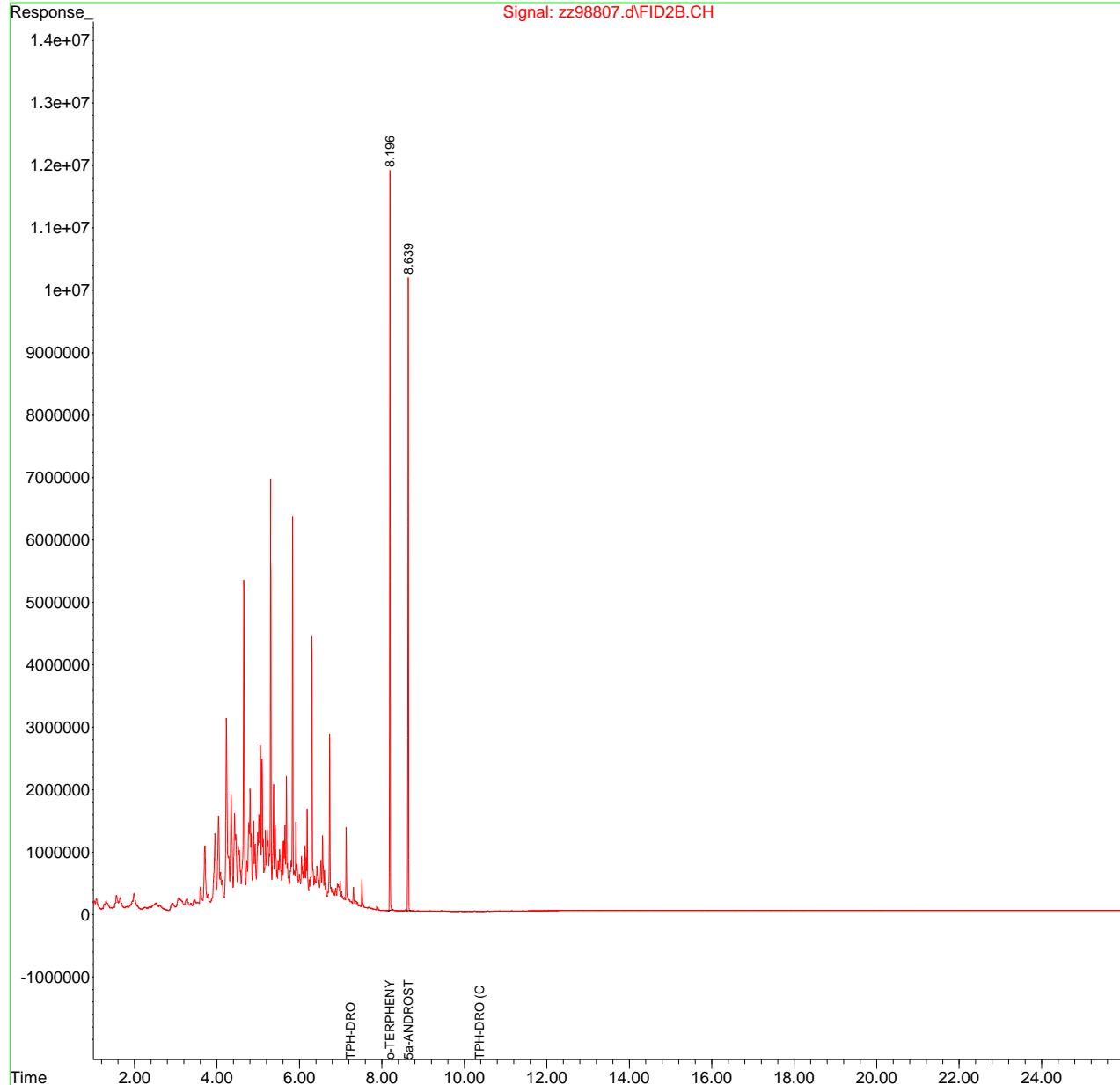
Response via : Initial Calibration

Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1 ul

Signal Phase : ZB-5

Signal Info : .25 mm ID



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\syrap\gzz3634\  
 Data File : zz98808.d

Signal(s) : FID2B.CH

Acq On : 26 Apr 2021 7:42 pm

Operator : thomasl

Sample : ref gas unleaded 25%

Misc : op32938,gzz3634,1.0,,,1,1

ALS Vial : 17 Sample Multiplier: 1

Integration File: autoint1.e

Quant Time: Apr 26 23:48:58 2021

Quant Method : C:\MSDCHEM\1\METHODS\drozz3628.m

Quant Title : GCTPHS

QLast Update : Fri Apr 23 05:30:12 2021

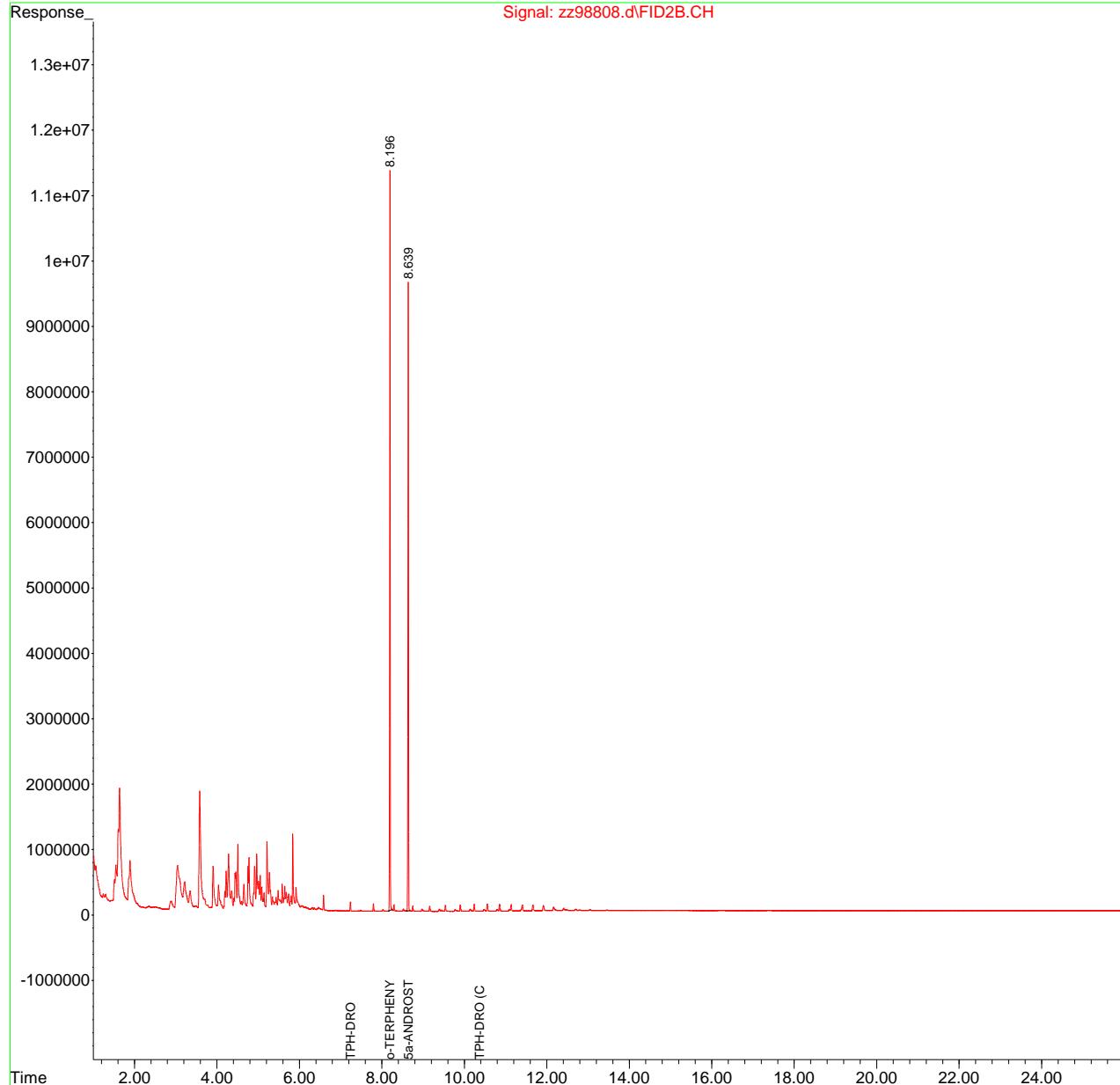
Response via : Initial Calibration

Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1 ul

Signal Phase : ZB-5

Signal Info : .25 mm ID

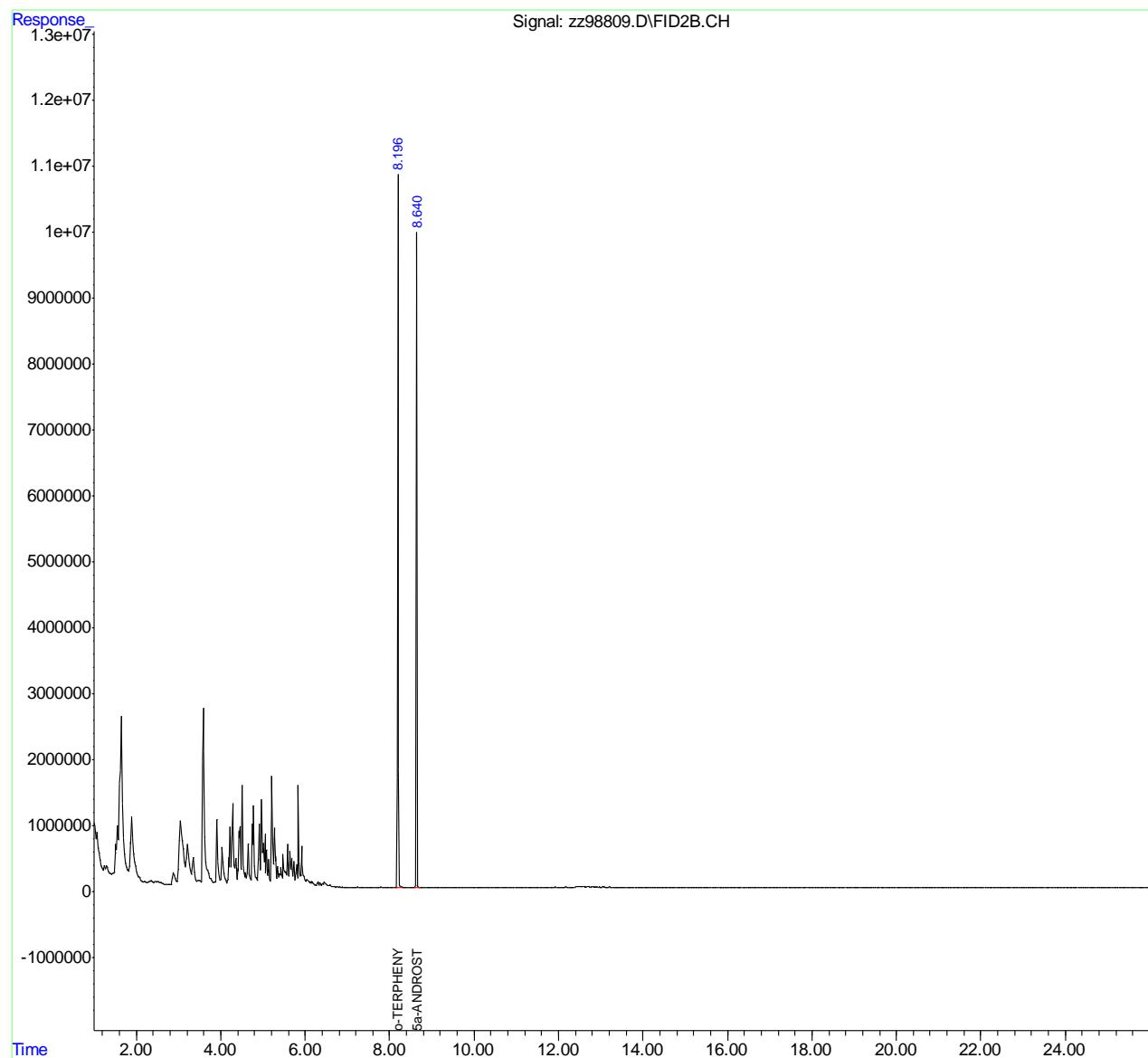


## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GZZ3634\  
Data File : zz98809.D  
Signal(s) : FID2B.CH  
Acq On : 26 Apr 2021 8:15 pm  
Operator : thomasl  
Sample : ref gas unleaded 50%  
Misc : op32938,gzz3634,1.0,,,1,1  
ALS Vial : 18 Sample Multiplier: 1

Integration File: autoint1.e  
Quant Time: May 07 15:32:26 2021  
Quant Method : C:\MSDCHEM\1\METHODS\DROZZ3628.M  
Quant Title : GCTPHS  
QLast Update : Sun Apr 18 13:08:08 2021  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1 ul  
Signal Phase : ZB-5  
Signal Info : .25 mm ID

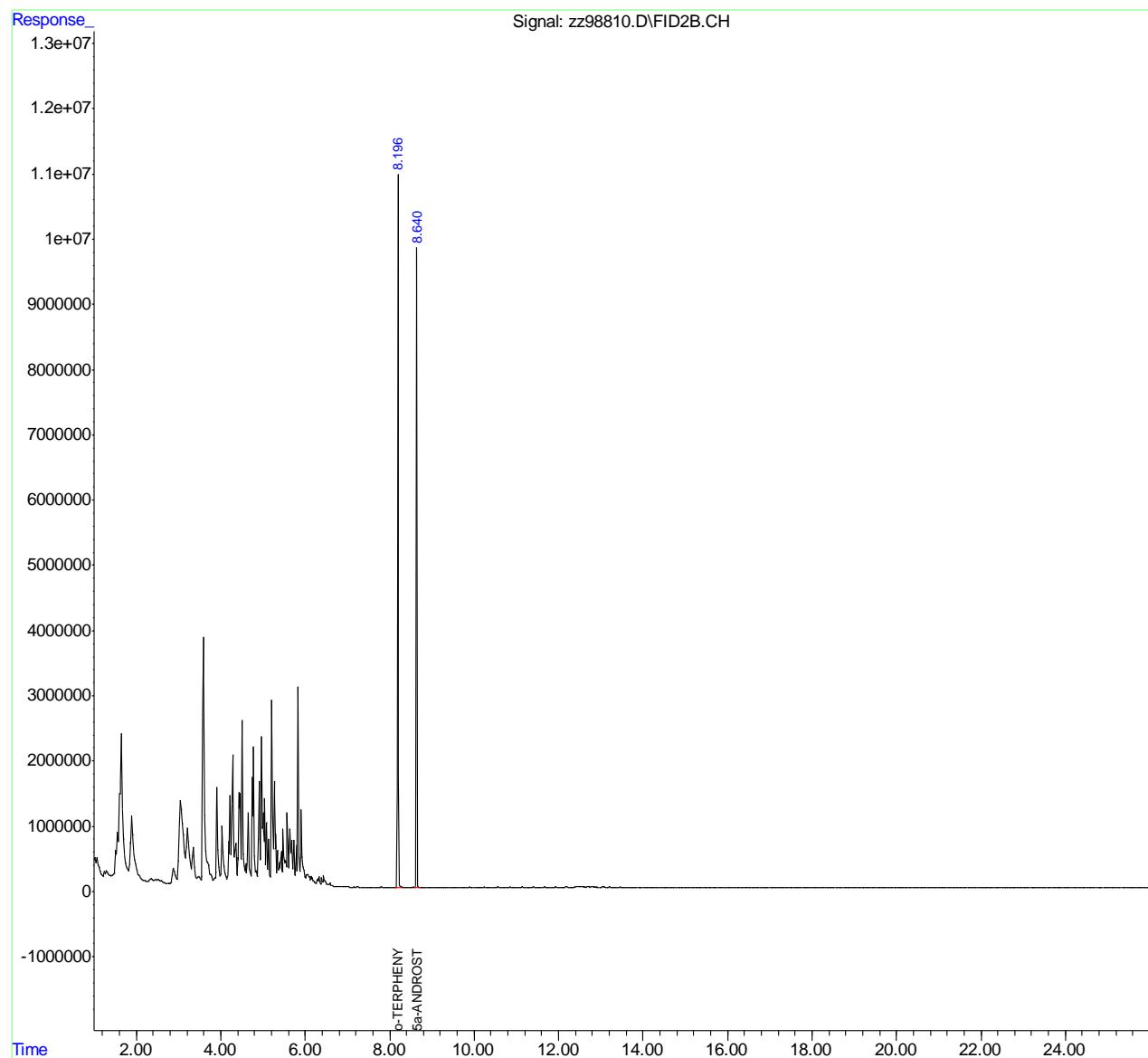


## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GZZ3634\  
 Data File : zz98810.D  
 Signal(s) : FID2B.CH  
 Acq On : 26 Apr 2021 8:49 pm  
 Operator : thomasl  
 Sample : ref gas unleaded 75%  
 Misc : op32938,gzz3634,1.0,,,1,1  
 ALS Vial : 19 Sample Multiplier: 1

Integration File: autoint1.e  
 Quant Time: May 07 15:32:42 2021  
 Quant Method : C:\MSDCHEM\1\METHODS\DROZZ3628.M  
 Quant Title : GCTPHS  
 QLast Update : Sun Apr 18 13:08:08 2021  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1 ul  
 Signal Phase : ZB-5  
 Signal Info : .25 mm ID

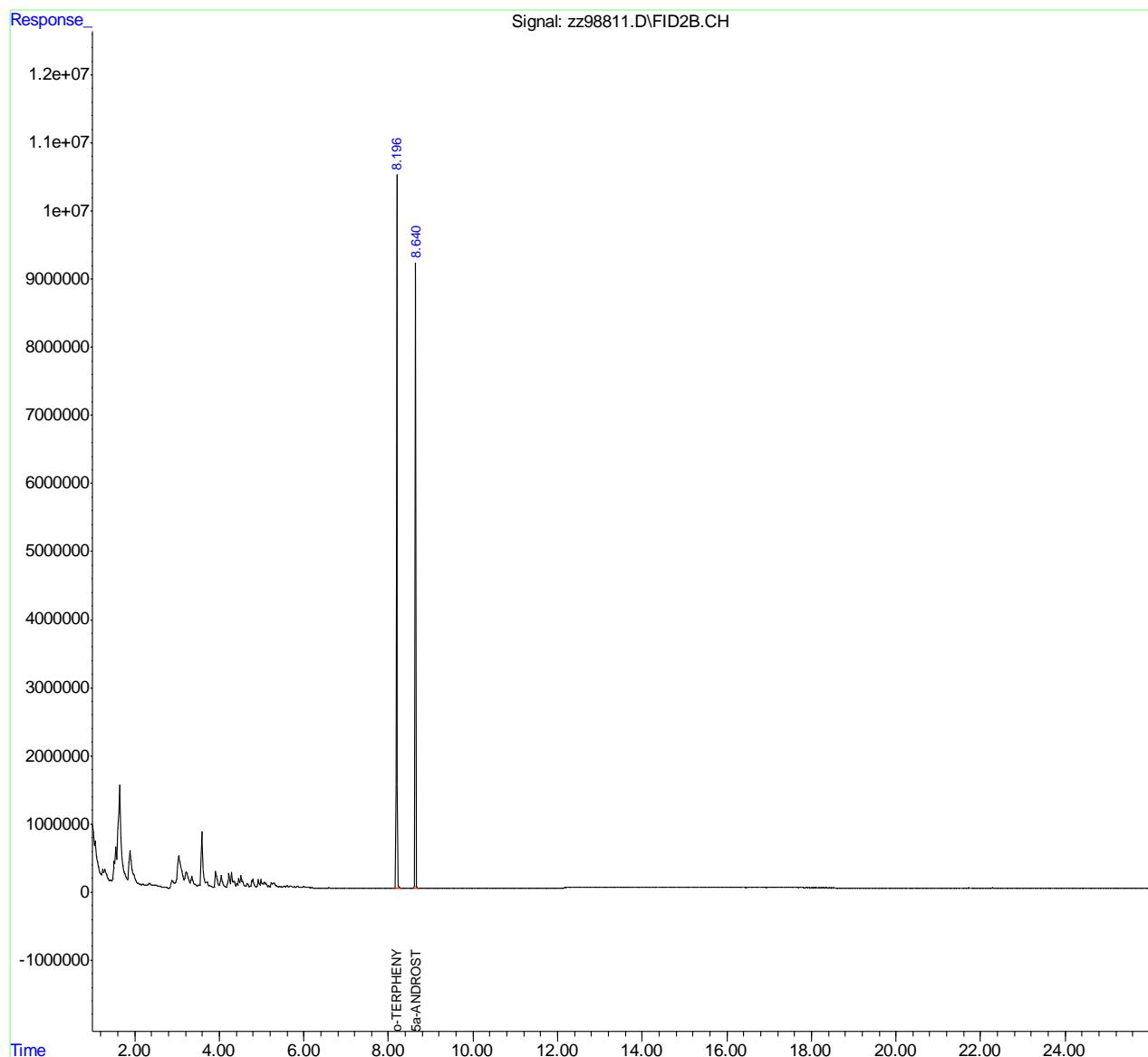


## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\GZZ3634\  
Data File : zz98811.D  
Signal(s) : FID2B.CH  
Acq On : 26 Apr 2021 9:22 pm  
Operator : thomasl  
Sample : ref gas regular unleaded  
Misc : op32938,gzz3634,1.0,,,1,1  
ALS Vial : 20 Sample Multiplier: 1

Integration File: autoint1.e  
Quant Time: May 07 15:32:59 2021  
Quant Method : C:\MSDCHEM\1\METHODS\DROZZ3628.M  
Quant Title : GCTPHS  
QLast Update : Sun Apr 18 13:08:08 2021  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1 ul  
Signal Phase : ZB-5  
Signal Info : .25 mm ID



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\syrap\gzz3634\  
 Data File : zz98812.d

Signal(s) : FID2B.CH

Acq On : 26 Apr 2021 9:55 pm

Operator : thomasl

Sample : ref gas regular leaded

Misc : op32938,gzz3634,1.0,,,1,1

ALS Vial : 21 Sample Multiplier: 1

Integration File: autoint1.e

Quant Time: Apr 26 23:50:30 2021

Quant Method : C:\MSDCHEM\1\METHODS\drozz3628.m

Quant Title : GCTPHS

QLast Update : Fri Apr 23 05:30:12 2021

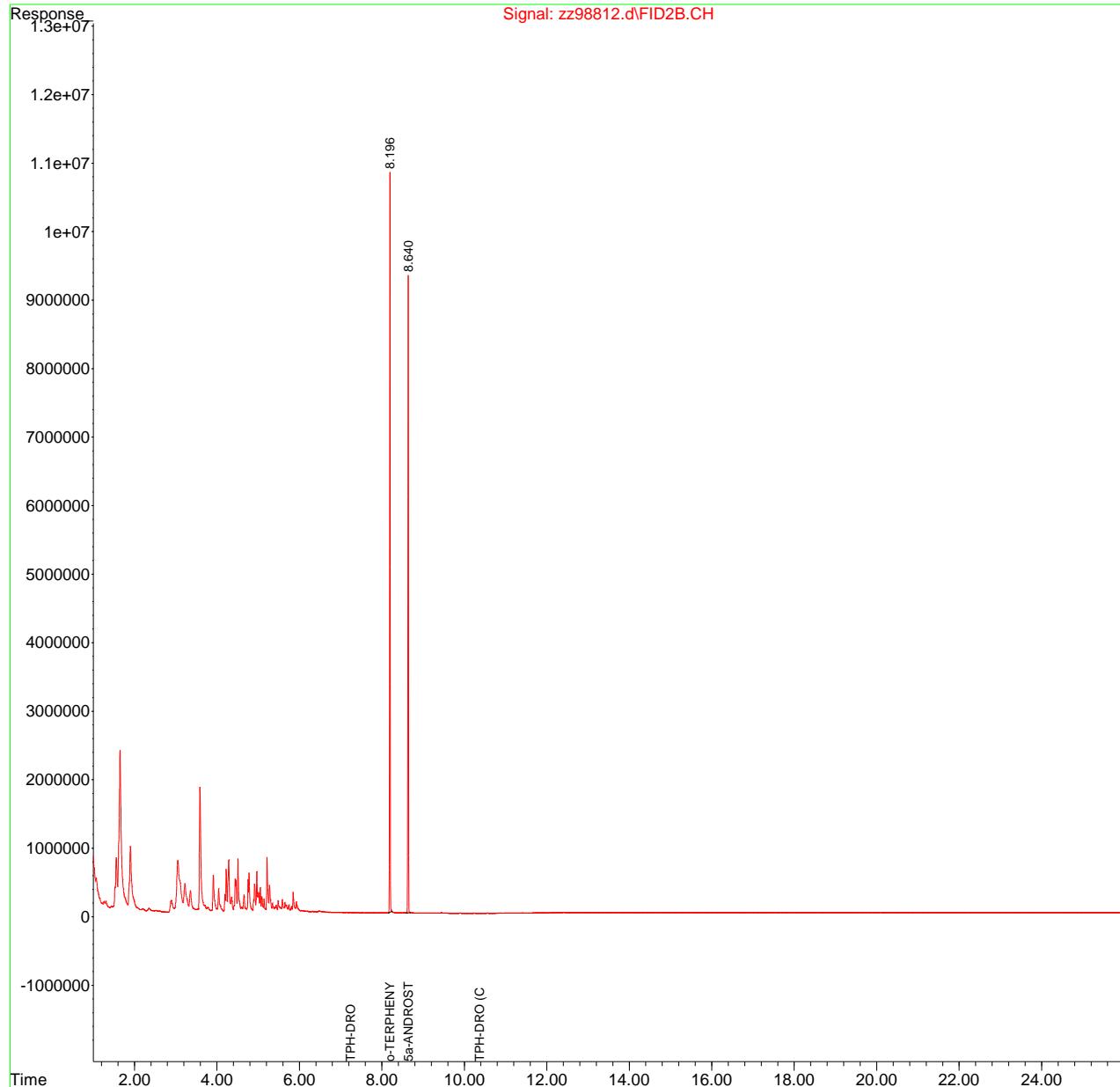
Response via : Initial Calibration

Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1 ul

Signal Phase : ZB-5

Signal Info : .25 mm ID



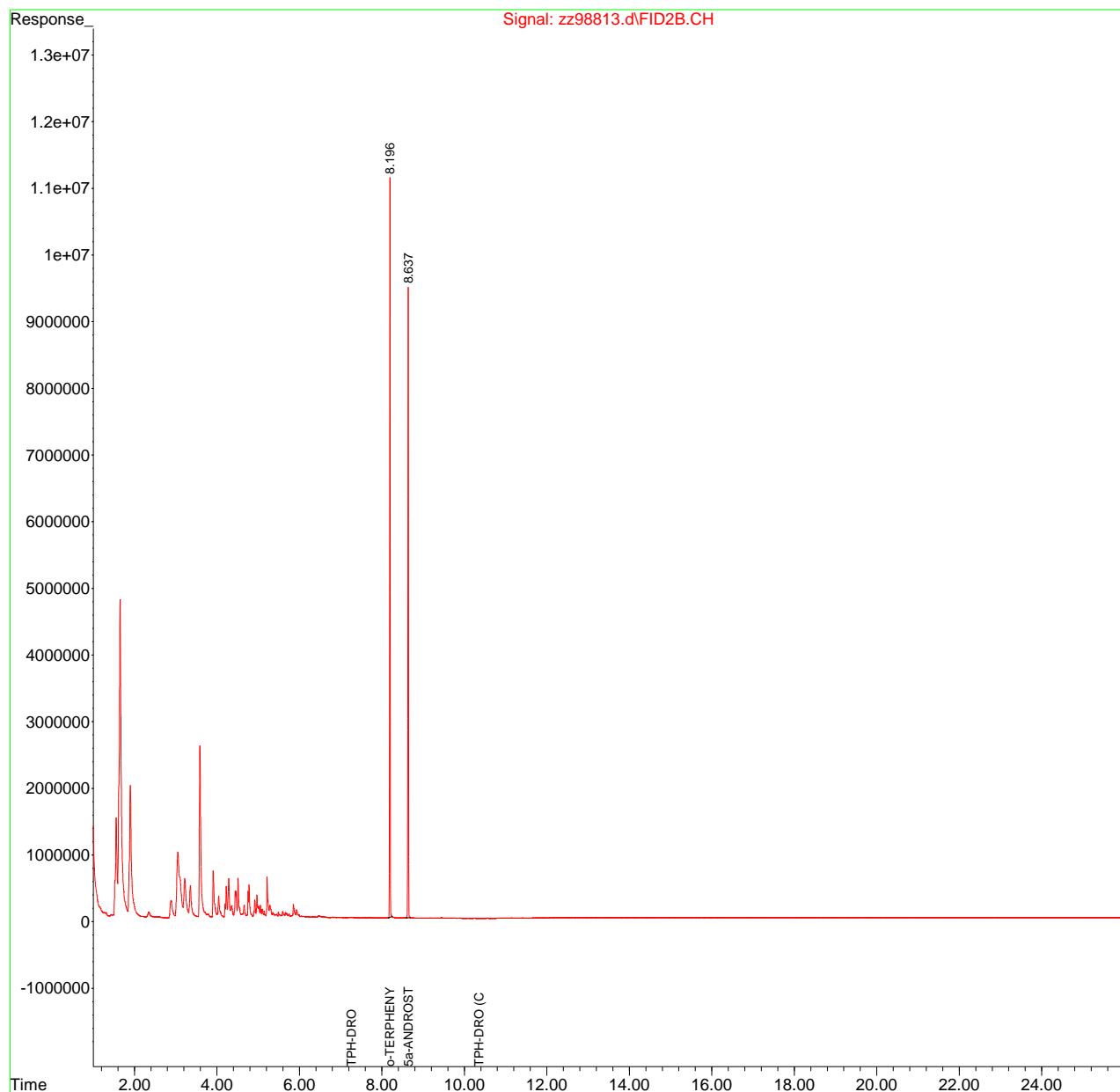
## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\syrap\gzz3634\  
Data File : zz98813.d

Signal(s) : FID2B.CH  
Acq On : 26 Apr 2021 10:29 pm  
Operator : thomasl  
Sample : ref gas premium  
Misc : op32938,gzz3634,1.0,,,1,1  
ALS Vial : 22 Sample Multiplier: 1

Integration File: autoint1.e  
Quant Time: Apr 26 23:52:09 2021  
Quant Method : C:\MSDCHEM\1\METHODS\drozz3628.m  
Quant Title : GCTPHS  
QLast Update : Fri Apr 23 05:30:12 2021  
Response via : Initial Calibration  
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1 ul  
Signal Phase : ZB-5  
Signal Info : .25 mm ID



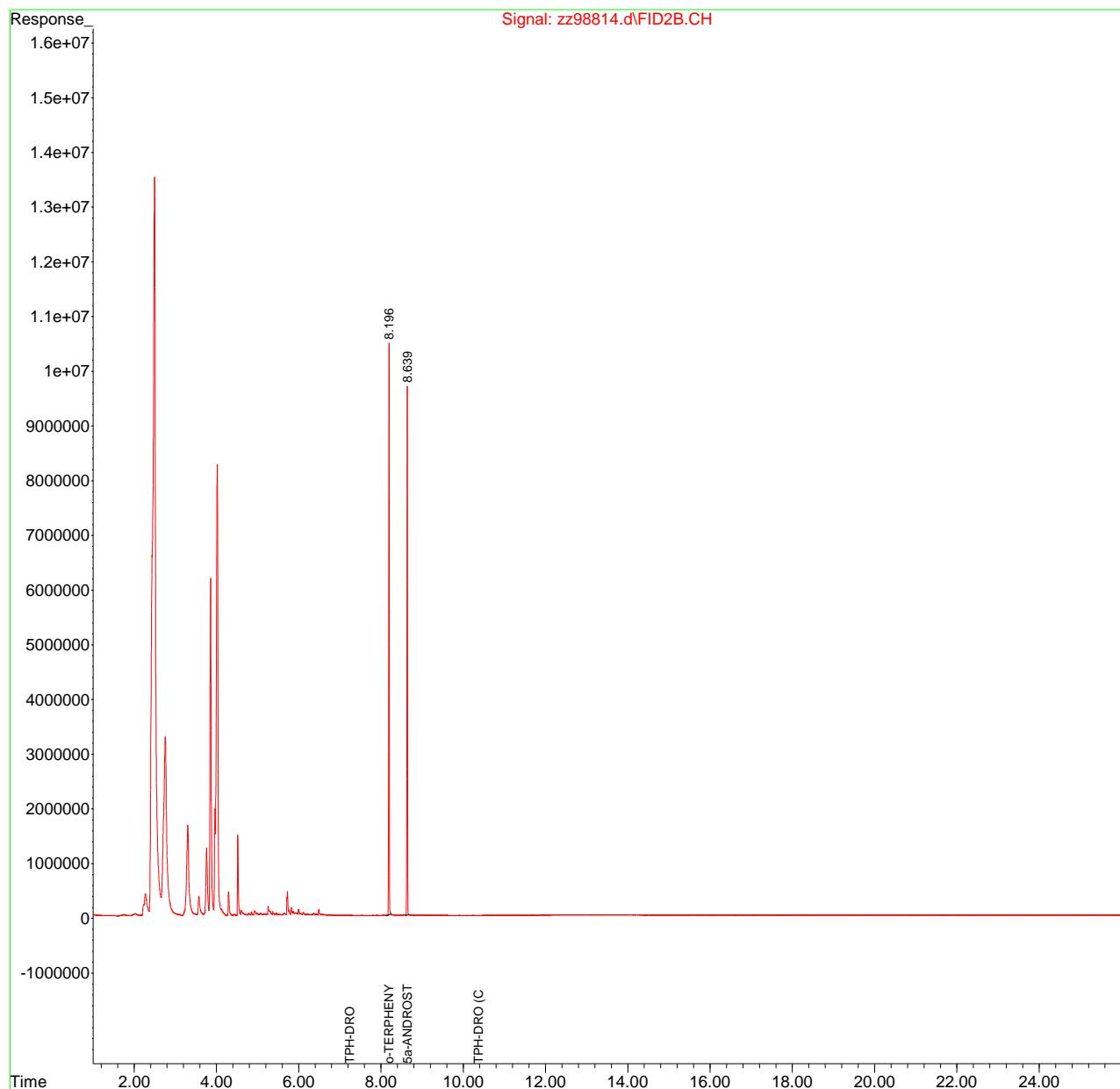
## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\syrap\gzz3634\  
 Data File : zz98814.d

Signal(s) : FID2B.CH  
 Acq On : 26 Apr 2021 11:02 pm  
 Operator : thomasl  
 Sample : ref turpentine  
 Misc : op32938,gzz3634,1.0,,,1,1  
 ALS Vial : 23 Sample Multiplier: 1

Integration File: autoint1.e  
 Quant Time: Apr 27 02:02:27 2021  
 Quant Method : C:\MSDCHEM\1\METHODS\drozz3628.m  
 Quant Title : GCTPHS  
 QLast Update : Fri Apr 23 05:30:12 2021  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1 ul  
 Signal Phase : ZB-5  
 Signal Info : .25 mm ID



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\syrap\gzz3634\  
Data File : zz98815.d

Signal(s) : FID2B.CH

Acq On : 26 Apr 2021 11:36 pm

Operator : thomasl

Sample : ref mineral spirits

Misc : op32938,gzz3634,1.0,,,1,1

ALS Vial : 24 Sample Multiplier: 1

Integration File: autoint1.e

Quant Time: Apr 27 02:04:59 2021

Quant Method : C:\MSDCHEM\1\METHODS\drozz3628.m

Quant Title : GCTPHS

QLast Update : Fri Apr 23 05:30:12 2021

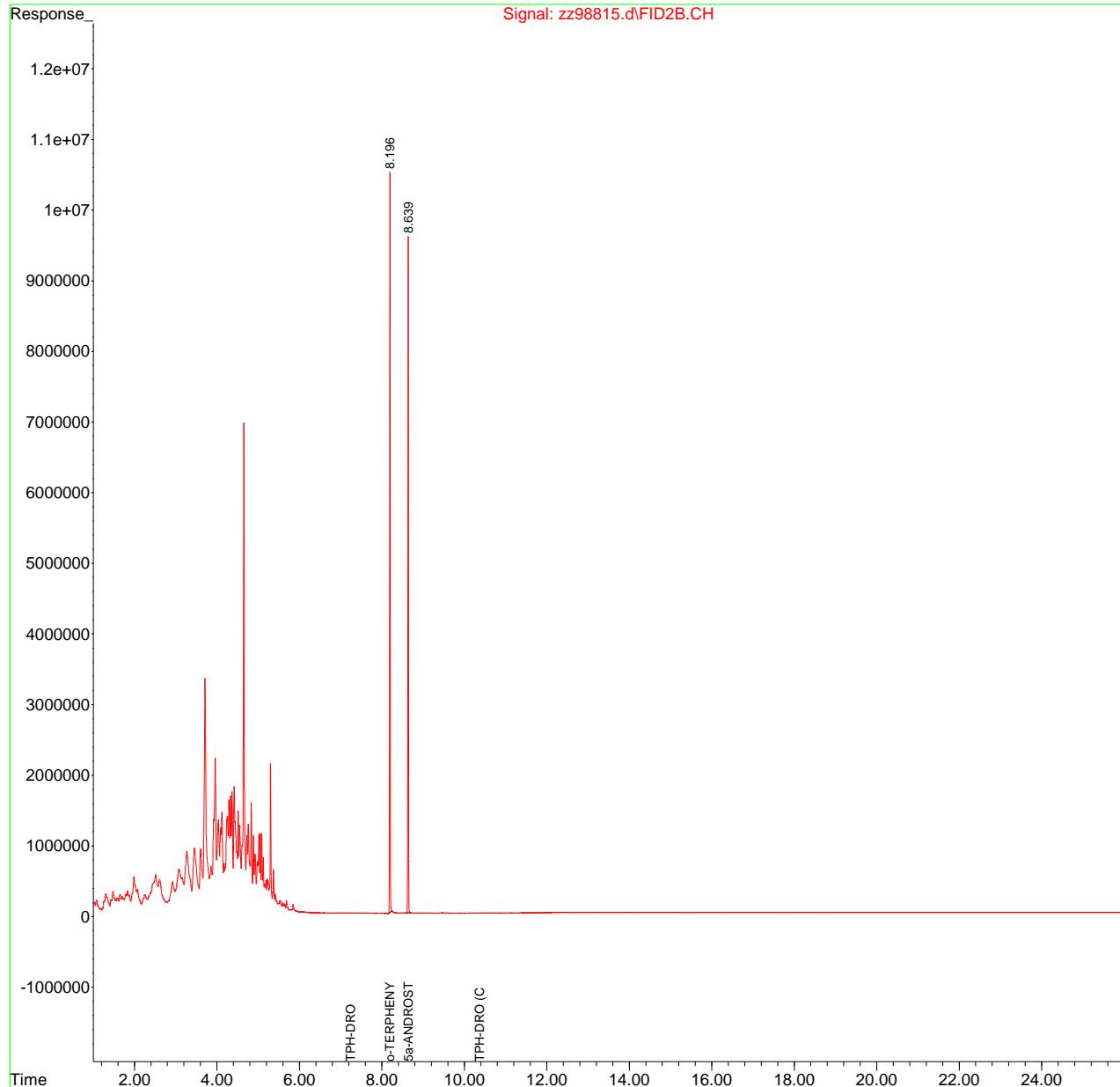
Response via : Initial Calibration

Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1 ul

Signal Phase : ZB-5

Signal Info : .25 mm ID



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\syrap\gzz3634\  
 Data File : zz98816.d

Signal(s) : FID2B.CH

Acq On : 27 Apr 2021 12:09 am

Operator : thomasl

Sample : ref kerosene

Misc : op32938,gzz3634,1.0,,,1,1

ALS Vial : 25 Sample Multiplier: 1

Integration File: autoint1.e

Quant Time: Apr 27 02:07:09 2021

Quant Method : C:\MSDCHEM\1\METHODS\drozz3628.m

Quant Title : GCTPHS

QLast Update : Fri Apr 23 05:30:12 2021

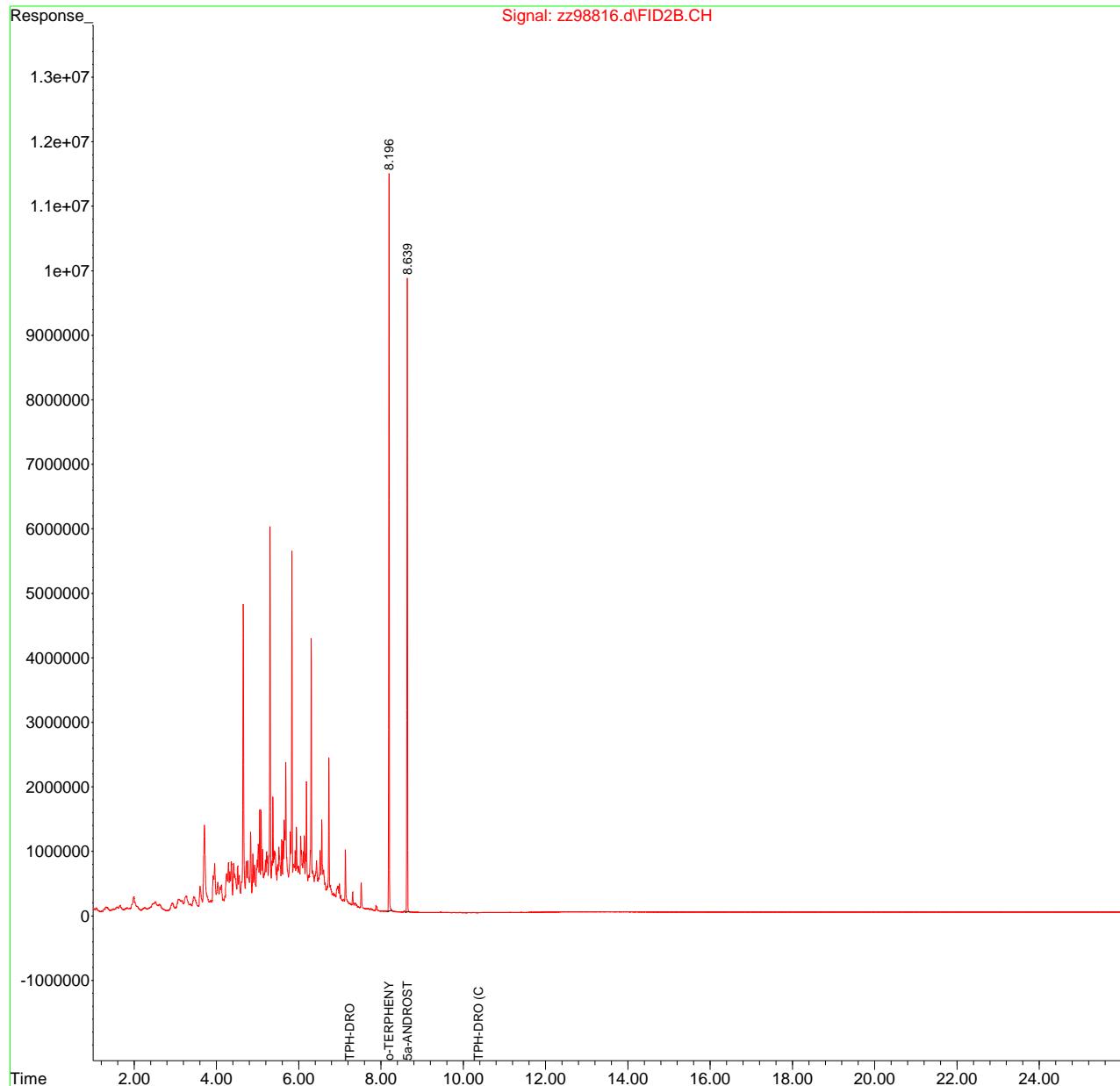
Response via : Initial Calibration

Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1 ul

Signal Phase : ZB-5

Signal Info : .25 mm ID



## Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\syrap\gzz3634\  
 Data File : zz98817.d

Signal(s) : FID2B.CH  
 Acq On : 27 Apr 2021 12:43 am  
 Operator : thomasl  
 Sample : ref hydraulic fluid  
 Misc : op32938,gzz3634,1.0,,,1,1  
 ALS Vial : 26 Sample Multiplier: 1

Integration File: autoint1.e  
 Quant Time: Apr 27 02:09:33 2021  
 Quant Method : C:\MSDCHEM\1\METHODS\drozz3628.m  
 Quant Title : GCTPHS  
 QLast Update : Fri Apr 23 05:30:12 2021  
 Response via : Initial Calibration  
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

Volume Inj. : 1 ul  
 Signal Phase : ZB-5  
 Signal Info : .25 mm ID

